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OM protein - protein search, using sw model

Run on: April 8, 2004, 15:30:06; Search time 43.3077 Seconds

(without alignments)

71.766 Million cell updates/sec

Title: US-09-787-443A-9

Perfect score: 11

Sequence: 1 ATNKKTGRRPR 11

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 1586107 segs, 282547505 residues

Word size :

Total number of hits satisfying chosen parameters: 22883

Minimum DB seq length: 11 Maximum DB seq length: 11

Post-processing: Listing first 100 summaries

Database: A Geneseq\_29Jan04:\*

1: geneseqp1980s:\*

2: geneseqp1990s:\*

3: geneseqp2000s:\*

4: geneseqp2000s:\*

5: geneseqp2002s:\*

6: geneseqp2003as:\*

7: geneseqp2003bs:\*

8: geneseqp2004s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

R	esult No.	Score	Query Match	Length	DB	ID	Descripti	Description	
	 1	11	100.0	. <b></b> 11	 3	AAY88537		NCAM Ig1	
	2	11	100.0	11	5	ABG69337	Abg69337	Human neu	
	3	4	36.4	11	2	AAR40873	Aar40873	SSP for f	
	4	4	36.4	11	2	AAY20756	Aay20756	Human neu	
	5	4	36.4	11	2	AAY39668	Aay39668	Tat-inhib	
	6	4	36.4	11	2	AAY25088	Aay25088	Transduct	
	7	4	36.4	11	2	AAY25086	Aay25086	Transduct	
	8	4	36.4	11	3	AAB26886	Aab26886	PR-39 der	
	9	4	36.4	11	3	AAY93554	Aay93554	Amino aci	

		0.5.4	•	2	22202552	Aay93552 Amino aci
10	4	36.4	11	3	AAY93552 AAB29435	Aab29435 Synthetic
11	4	36.4	$\begin{array}{c} 11 \\ 11 \end{array}$	3	AAB29433	Aab29438 Synthetic
12	4 4	36.4 36.4	11	4	AAM97944	Aam97944 Human pep
13 14	4	36.4	11	4	AAE04943	Aae04943 Nuclear D
14 15	4	36.4	11	4	AAB97278	Aab97278 PR-39 der
16	4	36.4	11	4	AAB84692	Aab84692 Amino aci
17	4	36.4	11	5	ABB82469	Abb82469 Peptide f
18	4	36.4	11	5	ABP54091	Abp54091 Transport
19	4	36.4	11	6	ABO14954	Abol4954 Microsoma
20	4	36.4	11	6	ABP60206	Abp60206 Synthetic
21	4	36.4	11	6	ABP56088	Abp56088 Protein t
22	4	36.4	11	6	ABG33050	Abg33050 Pig arg/p
23	4	36.4	11	6	ABU63113	Abu63113 Microsoma
24	4	36.4	11	7	ADB87318	Adb87318 Human pep
25	4	36.4	11	7	ADC19836	Adc19836 Fluoresce
26	4	36.4	11	7	ADC03321	Adc03321 Synthetic
27	3	27.3	11	1	AAP40439	Aap40439 Sequence
28	3	27.3	11	1	AAP50159	Aap50159 Human int
29	3	27.3	11	1	AAP82336	Aap82336 Compound Aap82811 Peptide f
30	3	27.3	11	1	AAP82811	Aap90842 New brady
31	3	27.3	1.1	1	AAP90842	Aap90643 Signal pe
32	3	27.3	11	1 2	AAP90643 AAR09490	Aar09490 Bradykini
33	3 3	27.3 27.3	11 11	2	AAR09490 AAR09489	Aar09489 Bradykini
34	3 3	27.3	$\frac{11}{11}$	2	AAR09485	Aar09485 Bradykini
35 36	3	27.3	11	2	AAR09463	Aar09463 Bradykini
30 37	3	27.3	11	2	AAR09488	Aar09488 Bradykini
38	3	27.3	11	2	AAR09491	Aar09491 Bradykini
39	3	27.3	11	2	AAR09486	Aar09486 Bradykini
40	3	27.3	11	2	AAR09461	Aar09461 Bradykini
41	3	27.3	11	2	AAR09464	Aar09464 Bradykini
42	3	27.3	11	2	AAR03387	Aar03387 Fragment
43	3	27.3	11	2	AAR05912	Aar05912 Partial s
44	3	27.3	11	2	AAR08092	Aar08092 Antifreez
45	3	27.3	11	2	AAR28593	Aar28593 Partial s
46	3	27.3	11	2	AAR25458	Aar25458 wohl-5. 3
47	3	27.3	11	2		Aar26211 Sequence
48	3	27.3	11	2	AAR37243	Aar37243 IL-6 anta
49	3	27.3	11	2	AAR44847	Aar44847 Lactoferr Aar38680 Bradykini
50	3	27.3	11	2	AAR38680	Aar33285 pDS56/RBS
51	3	27.3	11	2	AAR33285	Aar40874 SSP for f
52	3	27.3	11	2	AAR40874 AAR40872	Aar40872 SSP for f
53	3	27.3	11 11	2	AAR41634	Aar41634 SSP for f
54	3 3	27.3 27.3	11	2	AAR41034 AAR40878	Aar40878 SSP for f
55 56	3	27.3	11	2	AAR40870	Aar40870 SSP for f
57	3	27.3	11	2	AAR40871	Aar40871 SSP for f
58	3	27.3	11	2	AAR41635	Aar41635 SSP for f
59	3	27.3	11	2	AAR40875	Aar40875 SSP for f
60	3	27.3	11	2	AAR31485	Aar31485 P3 OF 31-
61	3	27.3	11	2	AAR54747	Aar54747 Ad5 fibre
62	3	27.3	11	2	AAR54725	Aar54725 ScFv-Ad5
63	3	27.3	11	2	AAR55163	Aar55163 Fragment
64	3	27.3	11	2	AAR67084	Aar67084 Sweet pep
65	3	27.3	11	2	AAR45679	Aar45679 Fibronect
66	3	27.3	11	2	AAR62627	Aar62627 Epidermal

67	1 3	3	27.3	11	2	AAR46491	Aar46491	Growth co
68		3	27.3	11	2	AAR71762	Aar71762	Neurotens
69		3	27.3	11	2	AAR71761	Aar71761	Neurotens
70		3	27.3	11	2	AAR71764	Aar71764	Neurotens
71	. 3	3	27.3	11	2	AAR71763	Aar71763	Neurotens
72		3	27.3	11	2	AAR54763	Aar54763	Plasminog
73		3	27.3	11	2	AAR46502	Aar46502	Growth co
74		3	27.3	11	2	AAR70293	Aar70293	Subpeptid
75		3	27.3	11	2	AAR70594	Aar70594	HIV(B35)-
76		3	27.3	11	2	AAR61397	Aar61397	PF4-relat
77	7 3	3	27.3	11	2	AAW21352	Aaw21352	Gastrin p
78	3	3	27.3	11	2	AAW21338	Aaw21338	Glucagon
79	9 3	3	27.3	11	2	AAR79718	Aar79718	Optimal p
80	) 3	3	27.3	11	2	AAR80937	Aar80937	MAGE-2 pe
81	L 3	3	27.3	11	2	AAR80912	Aar80912	MAGE-2 pe
82	2 3	3	27.3	11	2	AAR80062	Aar80062	Peptide u
83	3	3	27.3	11	2	AAR90612	Aar90612	Lactoferr
84	1 3	3	27.3	11	2	AAR87615	Aar87615	Lactoferr
85	5 3	3	27.3	11	2	AAR95097	Aar95097	Natural f
86	5 3	3	27.3	11	2	AAR91858	Aar91858	Lactoferr
87	7 3	3	27.3	11	2	AAW04653	Aaw04653	Dimeric b
88	3	3	27.3	11	2	AAR95265		nisA-(fs)
89	9 3	3	27.3	11	2	AAR96142		Fluorogen
90	) 3	3	27.3	11	2	AAR96435	Aar96435	Hepatitis
91	L 3	3	27.3	11	2	AAR96427		Hepatitis
92	2 3	3	27.3	11	2	AAR96429	Aar96429	Hepatitis
93	3	3	27.3	11	2	AAR96432		Hepatitis
94	1 3	3	27.3	11	2	AAR96436		Hepatitis
95	5 3	3	27.3	11	2	AAR96426		Hepatitis
96	5 3	3	27.3	11	2	AAR96431		Hepatitis
97	7 :	3	27.3	11	2	AAW10520	Aaw10520	Lactoferr
98	3	3	27.3	11	2	AAW10518		Lactoferr
99	) :	3	27.3	11	2	AAW17451		Consensus
100	) ;	3	27.3	11	2	AAR85318	Aar85318	Human ret

## ALIGNMENTS

```
RESULT 1
AAY88537
ID
     AAY88537 standard; peptide; 11 AA.
XX
     AAY88537;
AC
XX
DT
     07-AUG-2000 (first entry)
XX
     NCAM Ig1 binding peptide #9.
DΕ
XX
     NCAM; neural cell adhesion molecule; Igl; immunoglobulin domain 1;
KW
     neurite outgrowth promoter; proliferation; nerve damage; sclerosis;
ΚW
     impaired myelination; stroke; Parkinson's disease; memory; schizophrenia;
KW
     Alzheimer's disease; diabetes mellitus; circadian clock; nephrosis;
KW
     treatment; prosthetic nerve guide; treatment; nervous system.
KW
XX
os
     Synthetic.
XX
```

```
WO200018801-A2.
ΡN
XX
     06-APR-2000.
PD
XX
PF
     23-SEP-1999;
                     99WO-DK000500.
XX
                     98DK-00001232.
PR
     29-SEP-1998;
     29-APR-1999;
                     99DK-00000592.
PR
XX
     (RONN/) RONN L C B.
PA
     (BOCK/) BOCK E.
PA
     (HOLM/) HOLM A.
PΑ
     (OLSE/) OLSEN M.
PA
     (OSTE/) OSTERGAARD S.
PA
     (JENS/) JENSEN P H.
PA
     (POUL/) POULSEN F M.
PA
     (SORO/) SOROKA V.
PΑ
PΑ
     (RALE/) RALETS I.
PΑ
     (BERE/) BEREZIN V.
XX
PΙ
```

Ronn LCB, Bock E, Holm A, Olsen M, Ostergaard S, Jensen PH; Poulsen FM, Soroka V, Ralets I, Berezin V;

WPI; 2000-293111/25.

PI XX DR

XX

PT

PT PT

XX PS

XX CC

XX

Compositions that bind neural cell adhesion molecules useful for treating disorders of the nervous system and muscles e.g. Alzheimer's and Parkinson's diseases.

Example 4; Page 25; 119pp; English.

Neural cell adhesion molecule (NCAM) is a cellular adhesion molecule. NCAM is found in three forms, two of which are transmembrane forms, while the third is attached via a lipid anchor to the cell membrane. All three NCAM forms have an extracellular structure consisting five immunoglobulin domains (Ig domains). The Ig domains are numbered 1 to 5 from the N-  $\,$ terminal. The present sequence represents a peptide which binds to the NCAM Igl domain. The peptide can be used in a compound which binds to NCAM-Iq1/Iq2 domains, and is capable of stimulating or promoting neurite outgrowth from NCAM presenting cells, and is also capable of promoting the proliferation of NCAM presenting cells. The compound may be used in the treatment of normal, degenerated or damaged NCAM presenting cells. The compound may in particular be used to treat diseases of the central and peripheral nervous systems such as post operative nerve damage, traumatic nerve damage, impaired myelination of nerve fibres, conditions resulting from a stroke, Parkinson's disease, Alzheimer's disease, dementias, sclerosis, nerve degeneration associated with diabetes mellitus, disorders affecting the circadian clock or neuro-muscular transmission and schizophrenia. Conditions affecting the muscles may also be treated with the compound, such as conditions associated with impaired function of neuromuscular connections (e.g. genetic or traumatic shock or traumatic atrophic muscle disorders). Conditions of the gonads, pancreas (e.g. diabetes mellitus types I and II), kidney (e.g. nephrosis), heart, liver and bowel may also be treated using the compound. The compound is used in a prosthetic nerve quide, and also to stimulate the ability to learn, and to stimulate the memory of a subject

```
Sequence 11 AA;
SO
                          100.0%; Score 11; DB 3; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.4e-05;
           11; Conservative
                                 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            1 ATNKKTGRRPR 11
Qy
              3111111111
            1 ATNKKTGRRPR 11
Db
RESULT 2
ABG69337
     ABG69337 standard; peptide; 11 AA.
ID
XX
AC
    ABG69337;
XX
     21-OCT-2002 (first entry)
DT
XX
     Human neural cell adhesion molecule (NCAM) peptide #9.
DE
XX
     Human; neural cell adhesion molecule; NCAM; heart muscle cell survival;
KW
     acute myocardial infarction; central nervous system disorder; stroke;
KW
     peripheral nervous system disorder; postoperative nerve damage;
KW
     traumatic nerve damage; spinal cord injury; nerve fibre; schizophrenia;
KW
     postischaemic damage; multiinfarct dementia; multiple sclerosis;
KW
     nerve degeneration; diabetes mellitus; neuro-muscular degeneration;
KW
     Alzheimer's disease; Parkinson's disease;
KW
     Huntington's disease. atrophic muscle disorder; gonad degeneration;
KW
KW
     nephrosis.
XX
OS
     Homo sapiens.
XX
     WO200247719-A2.
PN
XX
PD
     20-JUN-2002.
XX
     12-DEC-2001; 2001WO-DK000822.
PF
XX
     12-DEC-2000; 2000DK-00001863.
PR
XX
     (ENKA-) ENKAM PHARM AS.
PΑ
XX
PI
     Bock E, Berezin V, Kohler LB;
XX
DR
     WPI; 2002-583473/62.
XX
     Use of a compound comprising a peptide of neural cell adhesion molecule,
PT
PT
     in the preparation of medicament for preventing death of cells presenting
     NCAM or NCAM ligand and treating central nervous system diseases.
PT
XX
     Disclosure; Page 15; 57pp; English.
PS
XX
     The invention relates to use of a compound (I) comprising a peptide which
CC
     comprises at least 5 contiguous amino acid residues of a sequence of the
CC
     neural cell adhesion molecule (NCAM), its fragment, variant or its mimic,
```

for the preparation of a medicament for preventing death of cells

CC

```
of a medicament for preventing death of cells presenting the NCAM or an
CC
CC
    NCAM ligand. The medicament is for the stimulation of the survival of
    heart muscle cells, such as survival after acute myocardial infarction.
CC
CC
    The medicament is for the treatment of diseases or conditions of the
CC
     central and peripheral nervous system, such as postoperative nerve
CC
    damage, traumatic nerve damage, e.g. resulting from spinal cord injury,
     impaired myelination of nerve fibres, postischaemic damage, e.g.
CC
     resulting from a stroke, multiinfarct dementia, multiple sclerosis, nerve
CC
CC
    degeneration associated with diabetes mellitus, neuro-muscular
CC
    degeneration, schizophrenia, Alzheimer's disease, Parkinson's disease and
    Huntington's disease. The medicament is for the treatment of diseases or
CC
     conditions of the muscles including conditions with impaired function of
CC
    neuro-muscular connections, such as genetic or traumatic atrophic muscle
CC
    disorders, and for the treatment of diseases of conditions of various
CC
    organs, such as degenerative conditions of the gonads, pancreas (e.g.
CC
CC
    diabetes mellitus type I and II) and kidney (e.g. nephrosis). ABG69329-
CC
    ABG69352 represent human NCAM peptides of the invention
XX
SO
    Sequence 11 AA;
 Query Match
                          100.0%; Score 11; DB 5; Length 11;
                          100.0%; Pred. No. 9.4e-05;
  Best Local Similarity
                               0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
           11; Conservative
           1 ATNKKTGRRPR 11
Qу
             Db
           1 ATNKKTGRRPR 11
RESULT 3
AAR40873
    AAR40873 standard; protein; 11 AA.
ID
XX
AC
    AAR40873;
XX
    24-OCT-2003 (revised)
DТ
DT
     25-MAR-2003
                 (revised)
DT
     28-MAR-1994 (first entry)
XX
DΕ
     SSP for flavonoid-3',5'-hydroxylase gene product.
XX
KW
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
    polymerase chain reaction; amplification; expression.
XX
OS
     Petunia x hybrida.
XX
PN
    WO9318155-A1.
XX
PD
    16-SEP-1993.
XX
     20-NOV-1992;
                    92WO-JP001520.
PF
XX
                    92JP-00044963.
PR
     02-MAR-1992;
XX
PA
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
```

presenting the NCAM or an NCAM ligand. (I) is useful in the preparation

```
XX
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PΙ
     Okinaka Y;
PΙ
XX
DR
     WPI: 1993-303469/38.
     N-PSDB; AAQ47874.
DR
XX
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
     colour and altered pigment pattern.
PT
XX
     Claim 11; Page 56; 82pp; Japanese.
PS
XX
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
     which do not occur naturally. The sequences were amplified using primers
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
     on 24-OCT-2003 to standardise OS field)
CC
XX
     Sequence 11 AA;
SO
                          36.4%; Score 4; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
                                                   0; Indels
            4; Conservative 0; Mismatches
                                                                  0; Gaps
                                                                              0;
            6 TGRR 9
Qу
              ++++
            4 TGRR 7
Db
RESULT 4
AAY20756
     AAY20756 standard; protein; 11 AA.
XX
AC
     AAY20756;
XX
DT
     22-JUL-1999 (first entry)
XX
     Human neurofilament-M mutant protein fragment 38.
DE
XX
     Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer;
KW
     frameshift mutation; age-related disease; neurodegenerative disorder;
KW
     Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal;
KW
     Huntington's disease; multiple sclerosis; alcoholic liver disease;
KW
     diabetes mellitus type II; microtubule associated protein; Tau; Big Tau;
KW
     ubiquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M;
ΚW
     neurofilament-F; presenilin I; presenilin II; cellular tumour antigen;
KW
     qlial fibrillary acidic protein; GFAP; p53; semaphorin III; HUPF-1;
KW
     bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A;
KW
     high mobility group protein-C; neuroendocrine specific protein A.
KW
XX
OS
     Synthetic.
OS
     Homo sapiens.
```

```
XX
ΡN
     WO9845322-A2.
XX
     15-OCT-1998.
PD
XX
                    98WO-IB000705.
PF
     02-APR-1998;
XX
                    97US-0043163P.
     10-APR-1997;
PR
XX
     (ROYA-) ROYAL NETHERLANDS ACAD ARTS & SCI.
PΑ
     (UYRO-) UNIV ROTTERDAM ERASMUS.
PA
     (UYUT-) RIJKSUNIV UTRECHT.
PA
XX
     Van Leeuwen FW, Grosveld FG, Burbach JPH;
PΙ
XX
     WPI; 1998-609901/51.
DR
     N-PSDB; AAX75759.
DR
XX
     Diagnosing disease by detecting frameshift mutations in RNA or
РΤ
     corresponding protein mutations - used to diagnose cancer and
PT
     neurological diseases, particularly Alzheimer's disease, and also for
PT
     treatment and prevention with specific ribozymes or wild-type RNA.
PT
XX
PS
     Disclosure; Fig 8; 258pp; English.
XX
     This invention describes a novel method for the diagnosis of a disease
CC
     caused by, or associated with, an RNA molecule that has a frameshift
CC
     mutation. The method is used to diagnose age-related diseases, especially
CC
     cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's
CC
     disease, Down's syndrome, myotonic dystrophy, Huntington's disease,
CC
     multiple sclerosis, alcoholic liver disease, diabetes mellitus type II
CC
     and many others listed) or susceptibility to these disorders. The method
CC
     allows a definitive diagnosis of Alzheimer's disease in living patients,
CC
     at an early stage. It is based on the observation that disease may be
CC
     caused by mutations in RNA rather than DNA. The invention describes the
CC
     used of neuronal system RNA molecules, specifically proteins including
CC
     beta-amyloid precursor protein (beta-APP), the microtubule associated
CC
     proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule
CC
     associated protein 2 (MAP2), neurofilament-L, neurofilament-M,
CC
     neurofilament-F, presenilin I, presenilin II, glial fibrillary acidic
CC
     protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma
CC
     2 (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group
CC
     protein-C (HMGP-C) and neuroendocrine specific protein A
CC
XX
     Sequence 11 AA;
SO
                          36.4%; Score 4; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
                                                                              0;
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
  Matches
            1 ATNK 4
Qу
              HHH
Dh
            4 ATNK 7
```

RESULT 5 AAY39668

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AAY39668 standard; peptide; 11 AA.
ID
XX
AC
     AAY39668;
XX
DT
     24-NOV-1999 (first entry)
XX
     Tat-inhibitory peptide.
DΕ
XX
     TAT-inhibitory peptide; HIV; therapy; viral infection; AIDS.
KW
XX
OS
     Synthetic.
XX
                     Location/Qualifiers
FH
     Key
FT
     Misc-difference 1
                     /note= "acetylated"
FT
     Misc-difference 10
FT
                     /note= "D-form residue"
FT
FT
     Modified-site
                     /note= "(biotin)-Cys-NH2"
FT
XX
     WO9947173-A2.
PN
XX
     23-SEP-1999.
PD
XX
                    99WO-US005914.
PF
     19-MAR-1999;
XX
     19-MAR-1998;
                    98US-00044411.
PR
XX
PΑ
     (UYNE-) UNIV NEW JERSEY.
XX
PI
     Stein S, Leibowitz MJ;
XX
DR
     WPI; 1999-561868/47.
XX
     New carriers for in vivo delivery of therapeutic agent, comprising a
PT
     polymer having a conjugated thiol compound which can form a disulphide
PT
     group with a thiol group of the agent.
PT
XX
     Claim 19; Page 54; 74pp; English.
PS
XX
     This sequence represents a Tat-inhibitory peptide, that can be used in
CC
     the carrier of the invention. The carrier is for in vivo delivery of a
CC
     therapeutic agent, and comprises a thiol group comprising a polymer, and
CC
     at least one thiol compound conjugated to the polymer such that the thiol
CC
     group of the thiol compound and the thiol group of the therapeutic agent
CC
     can form a disulphide bond. The carriers can be used for the delivery of
CC
     therapeutic agents such as HIV Tat-inhibiting polypeptides for the
CC
     treatment of viral infections such as AIDS. The carrier does not
CC
     interfere with the bioavailability of the therapeutic agent and protects
CC
     the therapeutic agent from proteolytic/nucleolytic degradation, from
CC
     eliciting an immune response, or from rapid renal clearance
CC
XX
SO
     Sequence 11 AA;
                           36.4%; Score 4; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
             4; Conservative 0; Mismatches
                                                    0; Indels
                                                                      Gaps
                                                                               0:
  Matches
```

```
8 RRPR 11
Qу
              ++++
Db
            4 RRPR 7
RESULT 6
AAY25088
    AAY25088 standard; peptide; 11 AA.
XX
AC
    AAY25088;
XX
DT
     24-AUG-1999 (first entry)
XX
    Transduction protein peptide motif 8.
DE
XX
     Anti-pathogen; fusion protein; protein transduction domain; PTD; AZT;
KW
     cytotoxic domain; suppressor; infection; medicament; ddI; ddC; d4T; 3TC;
KW
     FTC; DAPD; 1592U89; CS92; acyclovir; ganciclovir; peniclovir; interferon;
KW
     apoptosis; virus; HIV; cytomegalovirus; CMV; herpes simplex virus; HSV-1;
KW
     hepatitis virus; Kaposi's sarcoma-associated herpes virus; KSHV;
KW
     herpes virus; yellow fever virus; flavivirus; rhinovirus; plasmodial;
KW
     transduction efficiency; cytotoxin.
ΚW
XX
OS
    Unidentified.
XX
PΝ
     WO9929721-A1.
XX
     17-JUN-1999.
PD
XX
     10-DEC-1998;
                    98WO-US026358.
PF
XX
     10-DEC-1997;
                    97US-0069012P.
PR
     20-APR-1998;
                    98US-0082402P.
PR
XX
     (UNIW ) UNIV WASHINGTON.
PA
XX
PΙ
     Dowdy SF;
XX
     WPI; 1999-394958/33.
DR
XX
     New anti-pathogen systems, particularly for virus and plasmodium
PT
PT
     infections.
XX
     Claim 73; Page 90; 123pp; English.
PS
XX
     This invention describes a novel anti-pathogen system (APS) comprising a
CC
     fusion protein constructed from a covalently linked protein transduction
CC
     domain (PTD) and a cytotoxic domain. The APS can be used for suppressing
CC
CC
     a pathogen infection in a mammal. The method may further comprise
     administering a medicament e.g. AZT, ddI, ddC, d4T, 3TC, FTC, DAPD,
CC
     1592U89, CS92, acyclovir, ganciclovir, peniclovir or an interferon. The
CC
     APS can also be administered to a mammal in the presence of a pathogen to
CC
     induce apoptosis in a predetermined population of cells. The products can
CC
     be used for treating mammals suffering from or susceptible to a viral
CC
     infection or a disease associated with a virus, e.g. HIV, cytomegalovirus
CC
     (CMV), herpes simplex virus, e.g. type 1 (HSV-1) hepatitis virus, type C
```

```
(HCV), Kaposi's sarcoma-associated herpes virus (KSHV or human herpes
CC
     virus 8), yellow fever virus, flavivirus or rhinovirus, or suffering from
CC
     or susceptible to plasmodial infection or a disease associated with a
CC
     plasmodial infection, e.g. P. falciparum, P. vivax, P. ovale, or P.
CC
     malariae. The APS exhibits high transduction efficiency and specifically
CC
     kills or injures cells infected by one or more pathogens. Formation of
CC
     the cytotoxin is minimized or eliminated in uninfected cells and in
CC
     infected cells that keep the pathogen inactive. The APS can be
CC
     specifically tailored to kill or injure cells infected by one or more
CC
     pathogen strains. This sequence represents a transduction protein motif
CC
CC
     described in the invention
XX
     Sequence 11 AA;
SQ
                          36.4%; Score 4; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            8 RRPR 11
Qу
              +
            6 RRPR 9
Db
RESULT 7
AAY25086
TD
    AAY25086 standard; peptide; 11 AA.
XX
AC
     AAY25086;
XX
     24-AUG-1999 (first entry)
DT
XX
     Transduction protein peptide motif 6.
DE
XX
     Anti-pathogen; fusion protein; protein transduction domain; PTD; AZT;
ΚW
     cytotoxic domain; suppressor; infection; medicament; ddI; ddC; d4T; 3TC;
KW
     FTC; DAPD; 1592U89; CS92; acyclovir; ganciclovir; peniclovir; interferon;
KW
     apoptosis; virus; HIV; cytomegalovirus; CMV; herpes simplex virus; HSV-1;
KW
     hepatitis virus; Kaposi's sarcoma-associated herpes virus; KSHV;
KW
     herpes virus; yellow fever virus; flavivirus; rhinovirus; plasmodial;
KW
KW
     transduction efficiency; cytotoxin.
XX
     Unidentified.
OS
XX
ΡN
     WO9929721-A1.
XX
     17-JUN-1999.
PD
XX
     10-DEC-1998;
                    98WO-US026358.
PF
XX
     10-DEC-1997;
                    97US-0069012P.
PR
                    98US-0082402P.
     20-APR-1998;
PR
XX
     (UNIW ) UNIV WASHINGTON.
PA
XX
PΙ
     Dowdy SF;
XX
     WPI; 1999-394958/33.
DR
```

```
XX
     New anti-pathogen systems, particularly for virus and plasmodium
PT
     infections.
PT
XX
     Claim 73; Page 90; 123pp; English.
PS
XX
     This invention describes a novel anti-pathogen system (APS) comprising a
CC
     fusion protein constructed from a covalently linked protein transduction
CC
     domain (PTD) and a cytotoxic domain. The APS can be used for suppressing
CC
     a pathogen infection in a mammal. The method may further comprise
CC
     administering a medicament e.g. AZT, ddI, ddC, d4T, 3TC, FTC, DAPD,
CC
     1592U89, CS92, acyclovir, ganciclovir, peniclovir or an interferon. The
CC
     APS can also be administered to a mammal in the presence of a pathogen to
CC
     induce apoptosis in a predetermined population of cells. The products can
CC
     be used for treating mammals suffering from or susceptible to a viral
CC
     infection or a disease associated with a virus, e.g. HIV, cytomegalovirus
CC
     (CMV), herpes simplex virus, e.g. type 1 (HSV-1) hepatitis virus, type C
CC
     (HCV), Kaposi's sarcoma-associated herpes virus (KSHV or human herpes
CC
     virus 8), yellow fever virus, flavivirus or rhinovirus, or suffering from
CC
     or susceptible to plasmodial infection or a disease associated with a
CC
     plasmodial infection, e.g. P. falciparum, P. vivax, P. ovale, or P.
CC
     malariae. The APS exhibits high transduction efficiency and specifically
CC
     kills or injures cells infected by one or more pathogens. Formation of
CC
     the cytotoxin is minimized or eliminated in uninfected cells and in
CC
     infected cells that keep the pathogen inactive. The APS can be
CC
     specifically tailored to kill or injure cells infected by one or more
CC
     pathogen strains. This sequence represents a transduction protein motif
CC
CC
     described in the invention
XX
SQ
     Sequence 11 AA;
                          36.4%; Score 4; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            8 RRPR 11
Qу
              1111
            6 RRPR 9
Db
RESULT 8
AAB26886
     AAB26886 standard; peptide; 11 AA.
ID
XX
AC
     AAB26886;
XX
     01-FEB-2001 (first entry)
DT
XX
     PR-39 derived angiogenesis regulatory peptide 2.
DE
XX
     Angiogenesis; stimulation; PR-39; anoxia; myocardial infarction;
KW
KW
     myocardial ischaemia; proteasome.
XX
     Synthetic.
OS
XX
     WO200057895-A1.
PN
XX
```

```
05-OCT-2000.
PD
XX
     16-MAR-2000; 2000WO-US007050.
PF
XX
PR
     26-MAR-1999;
                    99US-00276868.
XX
     (BETH-) BETH ISRAEL DEACONESS MEDICAL CENT.
PA
XX
PI
     Simons M, Gao Y;
XX
DR
     WPI; 2000-628319/60.
XX
     Stimulating angiogenesis in situ, useful e.g. for treating anoxia and
PT
     infarction, by administering a PR-39 oligopeptide that regulates
PT
     enzymatic activity of proteosomes.
PT
XX
PS
     Claim 13; Page 41; 51pp; English.
XX
     This invention relates to a method for the stimulation of angiogenesis in
CC
     situ within a targeted collection of viable cells. The method comprises
CC
     introducing, into the cytoplasm, at least 1 member of the PR-39
CC
     oligopeptide collective, which interacts with cytoplasmic proteasomes.
CC
     Part of the proteolytic activity of the proteosomes is selectively
CC
     altered so as to stimulate angiogenesis. The method is used to induce
CC
     angiogenesis in tissue that has suffered anoxia or infarction, e.g.
CC
     myocardial infarction or chronic myocardial ischaemia, and also to study
CC
     the mechanisms that control angiogenesis. The present sequence represents
CC
     a PR-39 derived peptide which interacts with the proteasome and can be
CC
     used in the method of the invention
CC
XX
SQ
     Sequence 11 AA;
                          36.4%; Score 4; DB 3; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
            4; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
  Matches
            8 RRPR 11
Qу
              1111
Db
            2 RRPR 5
RESULT 9
AAY93554
     AAY93554 standard; peptide; 11 AA.
ID
XX
AC
     AAY93554;
XX
DT
     25-SEP-2000 (first entry)
XX
DE
     Amino acid sequence of a synthetic protein transduction domain.
XX
     Protein transduction system; protein transduction domain;
KW
     cytotoxic domain; pathogen infection; retroviral infection;
KW
KW
     plasmodial infection; cancer; prostate cancer.
XX
OS
     Synthetic.
XX
```

```
WO200034308-A2.
PN
XX
     15-JUN-2000.
PD
XX
                    99WO-US029289.
     10-DEC-1999;
PF
XX
     10-DEC-1998;
                    98US-0111701P.
PR
XX
     (UNIW ) UNIV WASHINGTON.
PA
XX
PΙ
     Dowdy SF;
XX
     WPI; 2000-431269/37.
DR
XX
     Protein transduction system for treating cancer and pathogenic infections
PT
     has a fusion protein comprising a protein transduction domain covalently
PT
     linked to a cytotoxic domain.
PT
XX
     Example 13; Page 85; 127pp; English.
PS
XX
     AAY93552-57 represent synthetic protein transduction domains, which are
CC
     used in the protein transduction system of the invention. The
CC
     specification describes a protein transduction system, which comprises a
CC
     fusion protein. This fusion protein has a covalently linked protein
CC
     transduction domain and cytotoxic domain. The system is useful for
CC
     treating pathogen infection in mammals, infections such as those caused
CC
     by CMV, HSV-1, HCV, KSHV, yellow fever virus, flavivirus or rhinovirus,
CC
     retroviral infections such as HIV-1, HIV-2, HTVL-3 and/or LAV, plasmodial
CC
     infections associated with P.faciparum, P.vivax, P.ovale, P.malariae. It
CC
     is also useful for treating cancer, especially prostate cancer
CC
XX
     Sequence 11 AA;
SO
                          36.4%; Score 4; DB 3; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRPR 11
Qy
              1111
            6 RRPR 9
Db
RESULT 10
AAY93552
     AAY93552 standard; peptide; 11 AA.
ID
XX
AC
     AAY93552;
XX
     25-SEP-2000 (first entry)
DΤ
XX
     Amino acid sequence of a synthetic protein transduction domain.
DΕ
XX
KW
     Protein transduction system; protein transduction domain;
     cytotoxic domain; pathogen infection; retroviral infection;
KW
     plasmodial infection; cancer; prostate cancer.
KW
XX
OS
     Synthetic.
```

```
XX
     WO200034308-A2.
PN
XX
PD
     15-JUN-2000.
XX
     10-DEC-1999;
                    99WO-US029289.
ΡF
XX
     10-DEC-1998;
                    98US-0111701P.
PR
XX
     (UNIW ) UNIV WASHINGTON.
PΑ
XX
     Dowdy SF;
PΙ
XX
     WPI; 2000-431269/37.
DR
XX
PT
     Protein transduction system for treating cancer and pathogenic infections
     has a fusion protein comprising a protein transduction domain covalently
PT
PT
     linked to a cytotoxic domain.
XX
PS
     Example 13; Page 84; 127pp; English.
XX
     AAY93552-57 represent synthetic protein transduction domains, which are
CC
     used in the protein transduction system of the invention. The
CC
CC
     specification describes a protein transduction system, which comprises a
     fusion protein. This fusion protein has a covalently linked protein
CC
     transduction domain and cytotoxic domain. The system is useful for
CC
     treating pathogen infection in mammals, infections such as those caused
CC
     by CMV, HSV-1, HCV, KSHV, yellow fever virus, flavivirus or rhinovirus,
CC
     retroviral infections such as HIV-1, HIV-2, HTVL-3 and/or LAV, plasmodial
CC
CC
     infections associated with P.faciparum, P.vivax, P.ovale, P.malariae. It
     is also useful for treating cancer, especially prostate cancer
CC
XX
SO
     Sequence 11 AA;
                          36.4%; Score 4; DB 3; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
            4; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            8 RRPR 11
Qу
              I \cup I
Db
            6 RRPR 9
RESULT 11
AAB29435
     AAB29435 standard; peptide; 11 AA.
XX
AC
     AAB29435;
XX
DT
     09-FEB-2001 (first entry)
XX
     Synthetic transduction domain, SEQ ID NO:36.
_{
m DE}
XX
KW
     Protein transduction domain; fusion molecule; therapeutic agent;
     drug targetting; drug discovery; cell transduction; bioavailability;
ΚW
KW
     vaccine; nervous system disorder; Alzheimer's disease;
KW
     Parkinson's disease; Huntington's disease; pre-senile dementia; epilepsy;
```

seizure; compulsive behaviour; meningitis; encephalitis; ischaemia; KW spongiform encephalopathy; dyslexia; age-related memory loss; KW Lou Gehring's disease; viral infection; HIV; bacterial infection. KW XX OS Synthetic. XX WO200062067-A1. PNXX PD19-OCT-2000. XX 28-FEB-2000; 2000WO-US005097. PFXX PR 28-FEB-1999; 99US-0122757P. 29-AUG-1999; 99US-0151291P. PR XX PA (UNIW ) UNIV WASHINGTON. XX PΙ Dowdy SF;

DR WPI; 2000-647439/62.

XX

XX

РΤ

PT PT

XX PS

XX

CC

Fusion molecules comprising protein transduction domains and therapeutic agents, useful for treating e.g. Alzheimer's and Parkinson's diseases, dementia and epilepsy.

Example 13; Page 110; 191pp; English.

The invention relates to a novel fusion molecule comprising at least one protein transduction domain (PTD) and at least one linked molecule, where the linked molecule has therapeutic or prophylactic activity against a medical condition. The invention also relates to methods of drug discovery in which the test compound is linked to a suitable transducing protein and introduced to a cell; a method of killing resistant microorganisms using a suitable fusion molecule; a mammal comprising a covalently linked fusion molecule; and a mammal adapted for experimental use in which at least one transduction molecule has been transduced into essentially all the cells of the mammal. The fusion molecule is used to deliver a therapeutic agent to a mammal, especially a human. The linked molecule may be a vaccine, an anti-infective drug, a cardiovascular drug, an antitumour drug, an analgesic, an antiinflammatory, a diagnostic marker or a drug for the treatment or prevention of a central or peripheral nervous system disorder. The central nervous system (CNS) disorder is especially Alzheimer's disease, Parkinson's disease, Huntington's disease, and also includes pre-senile dementia, epilepsy and seizures, compulsive behaviour, meningitis (including viral and bacterial meningitis), encephalitis, ischaemia, scrapie (or related spongiform encephalopathies), dyslexia, age-related memory loss or Lou Gehring's disease. Fusion molecules can also be used to kill virally infected cells, especially those infected with HIV. The vaccines are used to treat or prevent bacterial or viral infections. The methods are a highly effective means for transducing a molecule into an entire mammal or into specific cells, tissues, organs and systems within it. They also overcome bioavailability problems that are associated with many therapeutic agents (e.q., large molecular size, hydrophobicity, hydrophilicity, biological resistance), by providing efficient transduction of the target cell. The present sequence represents a protein transduction domain used in the invention

```
XX
SQ
     Sequence 11 AA;
  Query Match
                          36.4%; Score 4; DB 3; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
 Matches
            4; Conservative
            8 RRPR 11
Qу
              | | | |
            6 RRPR 9
Db
RESULT 12
AAB29438
ID
     AAB29438 standard; peptide; 11 AA.
XX
AC
    AAB29438;
XX
DT
     09-FEB-2001 (first entry)
XX
     Synthetic transduction domain, SEQ ID NO:38.
DE
XX
     Protein transduction domain; fusion molecule; therapeutic agent;
KW
     drug targetting; drug discovery; cell transduction; bioavailability;
KW
     vaccine; nervous system disorder; Alzheimer's disease;
KW
     Parkinson's disease; Huntington's disease; pre-senile dementia; epilepsy;
KW
     seizure; compulsive behaviour; meningitis; encephalitis; ischaemia;
KW
     spongiform encephalopathy; dyslexia; age-related memory loss;
KW
     Lou Gehring's disease; viral infection; HIV; bacterial infection.
KW
XX
     Synthetic.
OS
XX
     WO200062067-A1.
PN
XX
     19-OCT-2000.
PD
XX
     28-FEB-2000; 2000WO-US005097.
PF
XX
                    99US-0122757P.
PR
     28-FEB-1999;
                    99US-0151291P.
PR
     29-AUG-1999;
XX
PΑ
     (UNIW ) UNIV WASHINGTON.
XX
PI
     Dowdy SF;
XX
DR
     WPI; 2000-647439/62.
XX
PT
     Fusion molecules comprising protein transduction domains and therapeutic
     agents, useful for treating e.g. Alzheimer's and Parkinson's diseases,
PT
РΨ
     dementia and epilepsy.
XX
     Claim 38; Page 148; 191pp; English.
PS
XX
     The invention relates to a novel fusion molecule comprising at least one
CC
     protein transduction domain (PTD) and at least one linked molecule, where
CC
     the linked molecule has therapeutic or prophylactic activity against a
CC
CC
     medical condition. The invention also relates to methods of drug
```

```
discovery in which the test compound is linked to a suitable transducing
CC
    protein and introduced to a cell; a method of killing resistant
CC
    microorganisms using a suitable fusion molecule; a mammal comprising a
CC
CC
    covalently linked fusion molecule; and a mammal adapted for experimental
    use in which at least one transduction molecule has been transduced into
CC
     essentially all the cells of the mammal. The fusion molecule is used to
CC
     deliver a therapeutic agent to a mammal, especially a human. The linked
CC
    molecule may be a vaccine, an anti-infective drug, a cardiovascular drug,
CC
    an antitumour drug, an analgesic, an antiinflammatory, a diagnostic
CC
    marker or a drug for the treatment or prevention of a central or
CC
    peripheral nervous system disorder. The central nervous system (CNS)
CC
    disorder is especially Alzheimer's disease, Parkinson's disease,
CC
    Huntington's disease, and also includes pre-senile dementia, epilepsy and
CC
     seizures, compulsive behaviour, meningitis (including viral and bacterial
CC
    meningitis), encephalitis, ischaemia, scrapie (or related spongiform
CC
     encephalopathies), dyslexia, age-related memory loss or Lou Gehring's
CC
    disease. Fusion molecules can also be used to kill virally infected
CC
     cells, especially those infected with HIV. The vaccines are used to treat
CC
     or prevent bacterial or viral infections. The methods are a highly
CC
     effective means for transducing a molecule into an entire mammal or into
CC
     specific cells, tissues, organs and systems within it. They also overcome
CC
    bioavailability problems that are associated with many therapeutic agents
CC
     (e.g., large molecular size, hydrophobicity, hydrophilicity, biological
CC
     resistance), by providing efficient transduction of the target cell. The
CC
CC
     present sequence represents a specifically claimed protein transduction
CC
     domain
XX
SO
     Sequence 11 AA;
                          36.4%; Score 4; DB 3; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
                                                                             0;
 Matches
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
            8 RRPR 11
Qy
              Db
            6 RRPR 9
RESULT 13
AAM97944
     AAM97944 standard; peptide; 11 AA.
ΙD
XX
AC
     AAM97944;
XX
     24-JAN-2002 (first entry)
DT
XX
     Human peptide #1219 encoded by a SNP oligonucleotide.
DE
XX
     Immunosuppressive; immunostimulatory; antiinflammatory; cytostatic;
KW
KW
     neuroprotective; antimicrobial; gene therapy; vaccine; amylase; cancer;
     amyloid protein; angiopoietin; apoptosis related protein; cadherin;
KW
     cyclin; polymerase; oncogene; histone; kinase; colony stimulating factor;
KW
     complement related protein; cytochrome; kinesin; cytokine; interferon;
KW
     interleukin; G-protein coupled receptor; thioesterase; inflammation;
KW
     multifactorial disease; autoimmune disease; infection;
KW
     nervous system disease.
KW
XX
```

```
Homo sapiens.
OS
XX
PN
     WO200147944-A2.
XX
     05-JUL-2001.
PD
XX
     28-DEC-2000; 2000WO-US035498.
PF
XX
     28-DEC-1999;
                    99US-0173419P.
PR
     27-DEC-2000; 2000US-00173419.
PR
XX
     (CURA-) CURAGEN CORP.
PA
XX
     Shimkets RA, Leach M;
PΙ
XX
     WPI; 2001-465210/50.
DR
XX
     Polymorphic nucleic acids encoding e.g. amylases, cyclins, polymerases,
PT
     oncogenes and histones, useful for diagnosing and treating, e.g. cancer,
PT
     autoimmune diseases and infections.
PT
XX
     Disclosure; Page 3935; 4143pp; English.
PS
XX
     The present invention relates to oligonucleotides (see AAL26793-AAL34659)
CC
     encoding polymorphic variants of proteins related to amylases, amyloid
CC
     proteins, angiopoietin, apoptosis related proteins, cadherin, cyclin,
CC
     polymerase, oncogenes, histones, kinases, colony stimulating factors,
CC
     complement related proteins, cytochromes, kinesins, cytokines,
CC
     interferons, interleukins, G-protein coupled receptors and thioesterases.
CC
     The present sequence is a peptide encoded by one such oligonucleotide.
CC
     The oligonucleotides and the peptides encoded by them may be used in the
CC
     prevention, diagnosis and treatment of diseases associated with
CC
     inappropriate expression of the proteins listed above. Disorders that may
CC
     be prevented, diagnosed and/or treated include multifactorial diseases
CC
     with a genetic component, such as autoimmune diseases (e.g. rheumatoid
CC
     arthritis, multiple sclerosis, diabetes, systemic lupus erythromatosus
CC
     and Grave's disease), inflammation, cancer (e.g. cancers of the bladder,
CC
     brain, breast, colon and kidney, leukaemia), diseases of the nervous
CC
     system and an infection of pathogenic organisms
CC
XX
     Sequence 11 AA;
SQ
                          36.4%; Score 4; DB 4; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
             4; Conservative 0; Mismatches
                                                    0; Indels
            8 RRPR 11
Qy
               7 RRPR 10
Db
RESULT 14
     AAE04943 standard; peptide; 11 AA.
TD
XX
AC
     AAE04943;
XX
```

```
10-SEP-2001 (first entry)
DТ
XX
     Nuclear Dbf2-related (Ndr) substrate #29.
DΕ
XX
KW
     Nuclear Dbf2-related protein kinase; Ndr; cytostatic; gene therapy;
     calcium binding protein; CBP; tumour; melanoma.
KW
XX
     Synthetic.
OS
XX
PN
     US6258776-B1.
XX
     10-JUL-2001.
PD
XX
                    98US-00133062.
PF
     12-AUG-1998;
XX
     12-AUG-1997;
                    97GB-00017089.
PR
                    97GB-00017499.
PR
     19-AUG-1997;
XX
     (NOVS ) NOVARTIS AG.
PΑ
XX
     Hemmings BA, Millward TA;
PΙ
XX
     WPI; 2001-407387/43.
DR
XX
     Novel composition comprises a peptide comprising part of the sequence of
РΤ
     the nuclear Dbf2-related protein kinase, Ndr, useful in treating
PT
     disorders involving Ndr regulation by CBPs, e.g. melanoma.
PT
XX
     Example 2; Col 37; 22pp; English.
PS
XX
     The present peptide sequence is a substrate for Nuclear Dbf2-related
CC
     protein kinase. The present invention relates to a method of modulating
CC
     the activity of a protein comprising the activating domain of an Ndr
CC
CC
     family kinase, by influencing the binding of an EF hand-containing
     calcium binding protein (CBP). The invention also provides a novel
CC
     composition comprising nuclear Dbf2-related protein kinase peptides. The
CC
     composition is useful in treating disorders involving Ndr regulation by
CC
     CBPs, e.g. tumours especially melanoma. The Ndr protein kinases are also
CC
CC
     used in gene therapy
XX
     Sequence 11 AA;
SQ
  Query Match
                          36.4%; Score 4; DB 4; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
                                                                              0;
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
            4 KKTG 7
Qy
              \square
Db
            4 KKTG 7
RESULT 15
     AAB97278 standard; peptide; 11 AA.
ID
XX
AC
     AAB97278;
XX
```

```
09-AUG-2001 (first entry)
DТ
XX
DE
     PR-39 derived peptide PR-11.
XX
KW
     PR-39; cathelin; inflammation; wound healing; myocardial infarction;
     proteasome; proteolysis; alpha7; peptide degradation; angiogenesis;
KW
     anoxia; chronic myocardial ischaemia; heart tissue.
KW
XX
     Unidentified.
೧ಽ
XX
PN
     W0200130368-A1.
XX
     03-MAY-2001.
PD
XX
     06-OCT-2000; 2000WO-US027552.
PF
XX
PR
     25-OCT-1999;
                    99US-00426011.
XX
     (BETH-) BETH ISRAEL DEACONESS MEDICAL CENT.
PA
XX
PΤ
     Simons M, Gao Y;
XX
     WPI; 2001-355179/37.
DR
XX
     Stimulation of angiogenesis and inhibition of proteasome mediated
PТ
     degradation in cells, by introduction of PR-39 oligopeptide or its N-
РΤ
     terminal fragments or their conjugates, for use in anoxia and infarction
РΨ
PT
     conditions.
XX
PS
     Claim 13; Page 43; 52pp; English.
XX
CC
     Peptides AAB97277 - AAB97279 represent PR-39 derived oligopeptides. PR-39
     is a member of the the cathelin family of proteins, mature PR-39 is 39
CC
CC
     amino acids in length (see AAB97280), and has been shown to play a role
     in several inflammatory events including wound healing and myocardial
CC
     infarction. The PR-39 derived family of oligopeptides cause selective
CC
     inhibition of proteasome mediated degeneration of peptides and
CC
     stimulation of angiogenesis after their intracellular introduction to a
CC
CC
     target cell. PR-39 derived peptides are able to interact with at least
     the alpha7 subunit of the proteasomes, and therefore alter the
CC
CC
     proteolytic activity of proteasomes such that a selective increased
CC
     expression of specific proteins occurs. The invention includes methods
CC
     for the selective inhibition of proteasome mediated peptide degradation.
     The method provides means for stimulating angiogenesis as required in
CC
CC
     living tissues and organs which have suffered defects or have undergone
CC
     anoxia and/or infarction, myocardial infarction or chronic myocardial
CC
     ischaemia of heart tissue. Examples are the myocardium, skeletal or
     smooth muscle, artery or vein, lung, brain, kidney, spleen, liver,
CC
CC
     gastrointestinal or nerve tissues, limbs, and extremities. A particular
CC
     example is after myocardial infarction or ischaemia
XX
SO
     Sequence 11 AA;
                          36.4%; Score 4; DB 4; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
             4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
```

```
8 RRPR 11
Qу
              \perp
           2 RRPR 5
Dh
RESULT 16
AAB84692
ID
    AAB84692 standard; peptide; 11 AA.
XX
AC
    AAB84692;
XX
DT
     17-SEP-2001 (first entry)
XX
    Amino acid sequence of a PR-39 derived peptide (residues 1-11).
DE
XX
ΚW
     PR-39; IkappaBalpha degradation; NFkappaB transcription factor;
     myocardial infarction; chronic myocardial ischemia; heart disease;
KW
KW
     anoxia.
XX
     Unidentified.
OS
XX
     WO200147540-A1.
PN
XX
PD
     05-JUL-2001.
XX
     27-DEC-2000; 2000WO-US035293.
PF
XX
     29-DEC-1999;
                    99US-00474967.
PR
XX
     (BETH-) BETH ISRAEL DEACONESS MEDICAL CENT.
PA
XX
     Simons M, Gao Y;
PI
XX
DR
     WPI; 2001-441690/47.
XX
PT
     Selective inhibition of IkappaBalpha degradation within targeted viable
PT
     cell collection, involves interacting PR-39 oligopeptide with
PT
     IkappaBalpha and proteasomes, and altering proteolytic activity of
PТ
     proteasomes.
XX
PS
     Claim 12; Page 58; 69pp; English.
XX
     The present sequence represents a PR-39 derived peptide. It is used for
CC
     selective inhibition of IkappaBalpha degradation within a targeted cell
CC
     collection in-situ. The method is useful for selectively inhibiting
CC
CC
     IkappaBalpha protein degradation in situ, decreasing the activity of
     NFkappaB transcription factor and selective control of NFkappaB-dependent
CC
     gene expression in situ. The PR-39 derived peptides are useful in the
CC
CC
     treatment of myocardial infarction, chronic myocardial ischemia of heart
CC
     disease and anoxia
XX
SQ
     Sequence 11 AA;
                          36.4%; Score 4; DB 4; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
```

4; Conservative 0; Mismatches

0; Indels

0; Gaps

0;

Matches

```
8 RRPR 11
QУ
             2 RRPR 5
Db
RESULT 17
ABB82469
     ABB82469 standard; peptide; 11 AA.
ID
XX
AC
    ABB82469;
XX
     22-JAN-2003 (first entry)
DT
XX
     Peptide fragment comprised in a cell uptake enhancer peptide.
DE
XX
     Tat; transcompartmental; cytostatic; anti-HIV; therapeutic; diagnostic.
KW
XX
OS
     Synthetic.
XX
                     Location/Qualifiers
FH
     Kev
     Modified-site
FT
                     /note= "N-terminal acetylation"
FT
    Modified-site
                     10. .11
FT
                     /note= "biotinylated"
FT
    Modified-site
FT
FΨ
                     /note= "C-terminal amide"
XX
     WO200262396-A2.
PN
XX
PD
     15-AUG-2002.
XX
     08-FEB-2002; 2002WO-US003819.
PF
XX
PR
     08-FEB-2001; 2001US-0267396P.
XX
PA
     (UYNE-) UNIV NEW JERSEY MEDICINE & DENTISTRY.
PA
     (RUTF ) UNIV RUTGERS STATE NEW JERSEY.
PA
     (PARA/) PARANJP P.
XX
     Paranjp P, Stein S, Leibowitz MJ, Sinko PJ, Minko T, Williams GC;
PI
     Zhang G, Pooyan S, Park SH, Qiu B, Ramanathan S;
PΙ
XX
DR
     WPI; 2002-713317/77.
XX
PT
     New transcompartmental delivery promoting composition used for delivering
PT
     a therapeutic or diagnostic agent comprises a polymer having multiple
     functional groups, at least one of which is bound to the agent and at
PT
     least one uptake promoter.
PT
XX
PS
     Claim 27; Page 106; 142pp; English.
XX
     The invention relates to a new transcompartmental delivery promoting
CC
CC
     composition that comprises: (1) polymer (B) having multiple functional
CC
     groups, at least one which is covalently bound to a therapeutic or
CC
     diagnostic agent (A), and at one uptake promoter (C) covalently bound to
CC
     (A); or (2) (B) and at least one (C) bound to (B), where (B) further
CC
     comprises multiple functional groups at least one of which is covalently
```

```
bound to (A). The composition is used for delivering a therapeutic or
CC
     diagnostic agent from an initial bodily compartment (e.g. an
CC
     extravascular site or an intravascular site) to at least one target
CC
CC
     bodily compartment (e.g. circulation, central nervous system, brain, eye
     or an intracellular environment (including an epithelial cell, an
CC
     endothelial cell, a phagocytic cell, a lymphocyte, a neuron or a cancer
CC
     cell); and for delivering therapeutic or diagnostic agent such as
CC
     macrophages for the treatment of HIV infection. Sequences ABB82464-470
CC
     represent specific examples of peptide fragments contained in the
CC
     therapeutic agent or uptake enhancer comprising a thiol compound
CC
XX
SQ
     Sequence 11 AA;
                          36.4%; Score 4; DB 5; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
                                                                               0;
             4; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                      Gaps
            8 RRPR 11
Qу
              IIIII
            4 RRPR 7
RESULT 18
ABP54091
     ABP54091 standard; peptide; 11 AA.
ID
XX
AC
     ABP54091;
XX
DΤ
     15-JAN-2003 (first entry)
XX
DE
     Transport moiety cellular uptake peptide #15.
XX
KW
     Transporter; Spaced arginine moiety; vasotropic; neuroleptic; analgesic;
KW
     antiparkinsonian; biologically active compound; biological membrane;
KW
     epithelial tissue; endothelial tissue; ischaemia; neurotransmitter;
     schizophrenia; Parkinson's disease; pain; transport moiety.
KW
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
\mathbf{FT}
     Modified-site
FT
                     /label= Acp
FT
                     /note= "epsilon-aminocaproic acid (aca); N-terminally
                     modified with fluorescein (Fl)"
FТ
     Modified-site
FΤ
FT
                     /note= "C-terminally modified with CONH2"
XX
     WO200265986-A2.
PN
XX
PD
     29-AUG-2002.
XX
     14-FEB-2002; 2002WO-US004491.
PF
XX
     16-FEB-2001; 2001US-00269627.
PR
XX
PA
     (CELL-) CELLGATE INC.
XX
```

```
Wender PA, Rothbard JB, Wright L, Kreider EL, Vandeusen CL;
PΙ
XX
DR
    WPI; 2002-740700/80.
XX
     Composition, useful for increasing the transport of a biologically active
PT
     compound across a biological membrane, comprises a biologically active
PT
PT
     compound and a transport moiety.
XX
PS
     Example 1; Page 24; 58pp; English.
XX
     The present invention describes a composition (C) comprising a
CC
    biologically active compound (A) and a transport moiety (B) of formula:
CC
     (ZYZ)nZ (I), (ZY)nZ (II), (ZYY)nZ (III) or (ZYYY)nZ (IV), where Z = L-
CC
     arginine or D-arginine; Y = amino acid (not comprising amidino or
CC
     quanidino moiety); and n = 2-10. Also described is a method for
CC
     increasing the transport of a biologically active compound across a
CC
     biological membrane involving administering (C). (C) has vasotropic,
CC
     neuroleptic, antiparkinsonian and analgesic activities. (C) is used for
CC
     increasing the transport of a biologically active compound across a
CC
     biological membrane and across and into animal epithelial or endothelial
CC
     tissues. (C) can be used for treating ischaemia and delivering
CC
     neurotransmitters and other agents for treating schizophrenia,
CC
     Parkinson's disease and pain. The transport of the biologically active
CC
CC
     compound across the biological membrane is increased relative to the
     transport of the biologically active compound in the absence of the
CC
     transport moiety. The present sequence represents a transport moiety
CC
     cellular uptake peptide, which is used in an example from the present
CC
CC
     invention
XX
     Sequence 11 AA;
SQ
  Query Match
                          36.4%; Score 4; DB 5; Length 11;
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                     Gaps
                                                                             0;
 Matches
            8 RRPR 11
Qy
              1111
Db
            4 RRPR 7
RESULT 19
AB014954
ID
    ABO14954 standard; peptide; 11 AA.
XX
AC
     ABO14954;
XX
DT
     22-AUG-2003 (first entry)
XX
DE
     Microsomal delta-12 desaturase related peptide #29.
XX
     Microsomal fatty acid delta-12 desaturase; ricinoleic acid;
KW
     palmitic acid; stearic acid; unsaturated fatty acid;
KW
     coronary heart disease.
KW
XX
     Unidentified.
OS
XX
PN
     US2003033633-A1.
```

```
XX
     13-FEB-2003.
PD
XX
     28-MAR-2002; 2002US-00108795.
PF
XX
     17-NOV-1992;
                    92US-00977339.
PR
                    93WO-US009987.
PR
     15-OCT-1993;
     20-JUN-1994;
                    94US-00262401.
PR
PR
     14-AUG-1998;
                    98US-00133962.
     26-OCT-2000; 2000US-00697374.
PR
XX
     (LIGH/) LIGHTNER J E.
PΑ
     (OKUL/) OKULEY J J.
PA
     (HITZ/) HITZ W D.
PA
PΑ
     (KINN/) KINNEY A J.
PA
     (YADA/) YADAV N.
PΑ
     (GRAU/) PEREZ GRAU L.
XX
     Lightner JE, Okuley JJ, Hitz WD, Kinney AJ, Yadav N;
PΙ
     Perez Grau L;
PΙ
XX
     WPI; 2003-479605/45.
DR
```

New nucleic acid fragment encoding a fatty acid desaturase or a fatty acid desaturase-related enzyme, useful for producing transgenic plants with altered levels of unsaturated fatty acids, plant genetic mapping and breeding programs.

Disclosure; Page 41; 44pp; English.

XX

PT

PТ

PT PT

XX

PS XX

CC

CC CC

CC

CC

CC

CC

CC

CC

The invention relates to an isolated nucleic acid fragment encoding a microsomal delta-12 fatty acid desaturase or a fatty acid desaturaserelated enzyme that is at least 50 % identical to a polypeptide of P1-P6 (not shown in the specification). Also included are an isolated nucleic acid fragment comprising a sequence encoding a delta-12 fatty acid hydroxylase, a chimaeric gene capable of causing altered levels of ricinoleic acid or fatty acids in a transformed plant cell (comprising the nucleic acid fragment that is operably linked to suitable regulatory sequences), a plant containing the chimaeric gene, oils obtained from the seeds of the plant, producing seed oil containing altered levels of unsaturated fatty acids, molecular breeding to obtain altered levels of fatty acid in seed oil of oil-producing plant species, restriction fragment length polymorphism (RFLP) mapping of the nucleic acids, isolating nucleic acid fragments encoding fatty acid desaturases and related enzymes, altering fatty acid composition in seeds, reducing polyunsaturated fatty acids in rapeseed or soybean oil, reducing saturated fatty acids in rapeseed oil, a Brassica spp. (plant with seed palmitic acid of 2.7 % or seed stearic acid of 1.1%, or lower of total fatty acid), a Brassica spp. plant (with a combined palmitic acid and stearic acid content of 3.9% or lower of total fatty acids), a soybean plant (with seed palmitic acid of 6.7% or seed stearic acid content of 2.1%, or lower of total fatty acid), a soybean plant (with a combined seed palmitic acid and stearic acid content of 9.2% or lower of total fatty acids) and oils obtained from the plants above. The nucleic acid fragments and chimeric genes are useful for producing transgenic plants with altered levels of unsaturated fatty acids. The chimeric genes are useful for transforming various plants to modify the fatty acid

```
acid fragments are also useful as RFLP fragments in plant genetic mapping
CC
     and plant breeding programs. Production of plant oil for human
CC
     consumption with higher mono-unsaturated fat content and a lower
CC
CC
     saturated fat content may reduce the incidence of coronary heart disease.
CC
     The present sequence is a delta-12 desaturase associated peptide. Note:
     The disclosure states that SEQ ID 1-12 are cDNAs and their encoded
CC
CC
     desaturase proteins (these are claimed). The sequence listing only
     contains 34 short peptide sequences which are obviously not the claimed
CC
     cDNAs or full length proteins. It appears that the sequence listing is
CC
     that of an unrelated patent and has been substituted in error
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          36.4%; Score 4; DB 6; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+03;
            4; Conservative 0; Mismatches
                                                                  0; Gaps
                                                   0; Indels
                                                                              0;
            4 KKTG 7
Qу
              4 KKTG 7
RESULT 20
ABP60206
     ABP60206 standard; peptide; 11 AA.
XX
     ABP60206;
AC
XX
DT
     14-FEB-2003 (first entry)
XX
DE
     Synthetic peptide 5.
XX
KW
     Substrate specificity; enzyme activity; microarray; diagnosis; cancer;
KW
     differential analysis; high throughput analysis.
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Misc-difference 1. .2
                     /note= "Optionally absent"
FT
FT
     Modified-site
FT
                     /label= bAla
FT
    Modified-site
                     /note= "C-terminal amide"
\mathbf{FT}
XX
     WO200283933-A2.
PN
XX
PD
     24-OCT-2002.
XX
     17-APR-2002; 2002WO-EP004265.
PF
XX
PR
     17-APR-2001; 2001DE-01018774.
XX
PA
     (JERI-) JERINI AG.
XX
PΙ
     Schneider-Mergener J, Schutkowski M, Reimer U, Dong L, Panse S;
```

composition of the plant or the oil produced by the plant. The nucleic

```
Scharn D, Osterkamp F, Hummel G, Jobron L;
PΙ
XX
     WPI; 2003-075559/07.
DR
XX
PT
     Determining substrate specificity of enzymes, useful e.g. in screening
     for modulators, by detecting molecular weight changes in ordered array of
PT
PT
     amino acid sequences.
XX
     Example 18; Fig 8D; 79pp; German.
PS
ХX
     The invention relates to determining the substrate specificity of an
CC
CC
     enzymatic activity (EA) by contact and/or incubation of EA with an array
CC
     of many amino acid sequences (I) immobilised, in a directed manner, on
CC
     the flat surface of a carrier then detecting reaction of (I) with EA,
CC
     where the reaction is monitored from a change in the molecular weight of
     (I). The method is used to determine the pattern of EA in a sample, e.g.
CC
CC
     for differential analysis; for identification of a strain or species and
CC
     for diagnosis of disease, e.g. cancer. It can also be used for selection
CC
     of active agents, i.e. compounds that modulate EA. The method is suitable
CC
     for high throughput testing and the use of a non-porous carrier surface
CC
     makes it possible to use extremely small quantities of EA or sample. The
CC
     signal-to-noise ratio is much lower (typically by a factor of 3000) than
CC
     that in conventional peptide/protein arrays. The present sequence is that
     of a peptide used in examples of the invention
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          36.4%; Score 4; DB 6; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+03;
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            6 TGRR 9
Qy
              IIIII
            5 TGRR 8
RESULT 21
ABP56088
     ABP56088 standard; peptide; 11 AA.
XX
AC
     ABP56088;
XX
DT
     27-FEB-2003 (first entry)
XX
DΕ
     Protein transduction domain (PTD) peptide #10.
XX
KW
     Cancer cell death; cancer; tumour; protein transduction domain; CAV;
     chicken anaemia virus; cytostatic; proliferative cell disorder;
KW
KW
     carcinogenesis; metastasis.
XX
OS
     Unidentified.
XX
PN
     WO200285305-A2.
XX
PD
     31-OCT-2002.
XX
PF
     24-APR-2002; 2002WO-US013092.
```

```
XX
     24-APR-2001; 2001US-0286099P.
PR
XX
     (UNIW ) UNIV WASHINGTON.
PA
XX
     Dowdy SF, Ezhevsky SA, Wadia JS;
ΡI
XX
     WPI; 2003-093056/08.
DR
XX
     Novel fusion molecule useful for preventing or treating cancer, comprises
PT
     a protein transduction domain and a chicken anemia virus VP3 molecule.
PT
XX
PS
     Claim 26; Page 68; 104pp; English.
XX
     The present invention describes a fusion molecule (I) comprising at least
CC
CC
     one protein transduction domain (PTD) and at least one chicken anaemia
     virus (CAV) VP3 molecule. (I) has cytostatic activity and can be used for
CC
     inducing cell death. (I) is useful for detecting cancerous or pre-
CC
     cancerous cells in a mammal or for killing or injuring cancerous or pre-
CC
     cancerous cells in a mammal. (I) is useful as a magnetic bullet to
CC
CC
     selectively kill cancer cells in vitro and in vivo, for inducing cell
CC
     death, and for preventing or treating cancer and related proliferative
     disorders. (I) is also useful for studying mechanisms of carcinogenesis
CC
CC
     and metastases eukaryotic cells. (I) effectively transduces VP3 molecules
     directly into the cells. (I) attacks cancer and pre-cancerous cells while
CC
     leaving normal cells relatively unharmed. Since more cells can be
CC
     targeted by (I) when compared with past attempts using different VP3
CC
CC
     constructs, potential for patient relapse and side-effects are greatly
     reduced. The present sequence represents a specifically claimed PTD
CC
CC
     peptide which is given in the exemplification of the present invention
XX
SO
     Sequence 11 AA;
                          36.4%; Score 4; DB 6; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.4e+03;
            4; Conservative 0; Mismatches
                                                                              0;
 Matches
                                                   0; Indels
                                                                 0; Gaps
            8 RRPR 11
Qу
              1111
Db
            6 RRPR 9
RESULT 22
ABG33050
     ABG33050 standard; peptide; 11 AA.
XX
AC
     ABG33050;
XX
DT
     23-JAN-2003 (first entry)
XX
DE
     Pig arg/pro rich peptide PR-11.
XX
KW
     Pig; hypoxia inducible factor 2 alpha; HIF-2alpha; RDS;
     neonatal respiratory distress syndrome; pulmonary hypertension;
KW
KW
     hypoxia induced disorder; bronchopulmonary dysplasia; VEGF;
KW
     chronic lung disease of prematurity; vascular endothelial growth factor;
KW
     arg/pro rich peptide; PR-11.
```

```
XX
OS
    Sus scrofa.
XX
    WO200286497-A2.
PN
XX
PD
    31-OCT-2002.
XX
     24-APR-2002; 2002WO-EP004479.
PF
XX
     24-APR-2001; 2001EP-00201481.
PR
     10-AUG-2001; 2001EP-00203073.
PR
PR
     11-JAN-2002; 2002EP-00075077.
XX
     (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
PA
     (COLL-) COLLEN RES FOUND D.
PA
XX
PΙ
    Compernolle V, Carmeliet P;
XX
    WPI; 2003-058742/05.
DR
XX
     Use of hypoxia inducible factor 2 alpha to screen inhibitors of pulmonary
PT
    hypertension, comprises incubating the factor and the inhibitor,
PT
     isolating inhibitor and determining ability of inhibitor to inhibit
PT
PT
     hypertension.
XX
PS
     Disclosure; Page 16; 57pp; English.
XX
     The invention relates to the use of Hypoxia inducible factor 2 alpha (HIF
CC
CC
     -2alpha) as a target to screen for molecules that are able to inhibit the
CC
     development of pulmonary hypertension, comprising incubating a mixture
     comprising HIF-2alpha and at least one molecule, allowing binding between
CC
     HIF-2alpha and the molecule, isolating the molecule binding to HIF-
CC
CC
     2alpha, and determining the ability of the molecule to inhibit the
CC
     development of pulmonary hypertension; or incubating a mixture comprising
CC
     HIF-2 alpha, a reporter construct (where the reporter gene is driven by
CC
     HIF-2alpha) and at least one molecule, determining if the latter
CC
     incubation resulted in at least 50% reduction in expression of the
CC
     reporter gene, and determining the ability of the molecule to inhibit the
CC
     development of pulmonary hypertension. Also included are producing a
CC
     pharmaceutical composition comprising the inhibitor identified using HIF-
CC
     2alpha and further mixing the inhibitor (its derivative or homologue)
CC
     with a carrier and use of HIF-2alpha or vascular endothelial growth
CC
     factor (VEGF) (or their fragment or homologue) for manufacturing a
CC
     medicament for treating neonatal respiratory distress syndrome (RDS). HIF
     -2alpha is useful for screening molecules that inhibit the development of
CC
CC
     pulmonary hypertension. HIF-2alpha and VEGF are useful for manufacturing
CC
     a medicament for treating neonatal respiratory distress syndrome ( a
     hypoxia induced disorder which also includes bronchopulmonary dysplasia
CC
CC
     and chronic lung disease of prematurity. The present sequence is a Pig
CC
     arg/pro rich peptide, PR-11, which is active against RDS
XX
SQ
     Sequence 11 AA;
                          36.4%; Score 4; DB 6; Length 11;
 Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0:
```

```
8 RRPR 11
Qу
              +111
            2 RRPR 5
Db
RESULT 23
ABU63113
     ABU63113 standard; peptide; 11 AA.
ID
XX
     ABU63113;
AC
XX
     24-SEP-2003 (first entry)
DT
XX
     Microsomal delta-12 fatty acid desaturase associated peptide #29.
DE
XX
     Microsomal delta-12 fatty acid desaturase; desaturase-related enzyme;
KW
KW
     transgenic plant; unsaturated fatty acid.
XX
OS
     Synthetic.
XX
PN
     US2003066104-A1.
XX
     03-APR-2003.
PD
XX
     03-APR-2002; 2002US-00115364.
PF
XX
                    92US-00977339.
PR
     17-NOV-1992;
                    93WO-US009987.
PR
     15-OCT-1993;
                    94US-00262401.
PR
     20-JUN-1994;
     14-AUG-1998;
                    98US-00133962.
PR
     26-OCT-2000; 2000US-00697379.
PR
XX
     (LIGH/) LIGHTNER J E.
PA
PA
     (OKUL/) OKULEY J J.
PΑ
     (HITZ/) HITZ W D.
PA
     (KINN/) KINNEY A J.
     (YADA/) YADAV N.
PA
PA
     (GRAU/) PEREZ GRAU L.
XX
     Lightner JE, Okuley JJ, Hitz WD, Kinney AJ, Yadav N;
PI
PΙ
     Perez Grau L;
XX
DR
     WPI; 2003-540829/51.
XX
PT
     New nucleic acid fragment comprising a sequence encoding a fatty acid
PT
     desaturase or desaturase-related enzyme, useful for creating transgenic
PT
     plants with altered levels of unsaturated fatty acids.
XX
PS
     Disclosure; Page 40; 44pp; English.
XX
     The invention describes a new isolated nucleic acid fragment comprising a
CC
     sequence encoding a fatty acid desaturase or desaturase-related enzyme
CC
     with at least 50% identity to the polypeptide encoded by the seven amino
CC
     acid sequences comprising 9-10 aa residues. The nucleic acid fragment is
CC
CC
     useful for creating transgenic plants with altered levels of unsaturated
     fatty acids. This is the amino acid sequence of a microsomal delta-12
CC
```

fatty acid desaturase associated peptide. Note: The sequence listing

```
given in the specification does not appear to correspond to the sequences
CC
     described in the specification
CC
XX
     Sequence 11 AA;
SQ
                          36.4%; Score 4; DB 6; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
                               0; Mismatches
                                                                  0; Gaps
                                                                              0;
  Matches
            4; Conservative
                                                   0; Indels
            4 KKTG 7
QУ
              +1111
Db
            4 KKTG 7
RESULT 24
ADB87318
     ADB87318 standard; peptide; 11 AA.
ID
XX
AC
     ADB87318;
XX
     04-DEC-2003 (first entry)
DT
XX
     Human peptide P11 related to post-operative adhesion treatment.
DE
XX
     hypoxia-induced gene; adhesion formation; hypoxia inducible factor;
KW
KW
     placental growth factor; PIGF; vascular endothelial growth factor-B;
     VEGF-B; post-operative adhesions; POA; surgery; gynaecological surgery;
KW
     pelvic surgery; cardiological surgery; surgical trauma; scar formation;
KW
     post-operative morbidity; post-operative mortality; vulnerary;
KW
     gene therapy; wound; inflammation; trauma; intestinal obstruction;
ΚW
     small bowel obstruction; chronic pelvic pain; infertility; PR11; PR39;
KW
KW
     human.
XX
os
     Homo sapiens.
XX
PN
     WO2003063904-A2.
XX
PD
     07-AUG-2003.
XX
     29-JAN-2003; 2003WO-EP000892.
PF
XX
PR
     29-JAN-2002; 2002GB-00001983.
PR
     04-FEB-2002; 2002GB-00002379.
PR
     29-OCT-2002; 2002GB-00025128.
XX
PΑ
     (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
PA
     (THRO-) THROMB-X.
     (LEUV-) LEUVEN RES & DEV.
PA
XX
PΙ
     Koninckx P, Carmeliet P, Collen D, Molinas Sanabria CR;
XX
     WPI; 2003-646103/61.
DR
XX
PT
     New inhibitors of hypoxia-induced gene (e.g. hypoxia inducible factor,
PT
     placental growth factor, or vascular endothelial growth factor-B gene),
PT
     useful for treating adhesion formation resulting from wounds, surgery or
PТ
     inflammation.
```

```
XX
PS
     Claim 5; Page 7; 33pp; English.
XX
     This invention relates to a novel compound that inhibits the expression
CC
CC
     and/or activity of a hypoxia-induced gene used for the manufacture of a
CC
     medicament for treating adhesion formation. The hypoxia-induced gene is a
CC
     hypoxia inducible factor, placental growth factor (PlGF), or vascular
     endothelial growth factor-B (VEGF-B). Post-operative adhesions (POA) are
CC
     an unwanted result from surgery (for example gynaecological, pelvic or
CC
     cardiological surgery), when surgical trauma to tissue often causes
CC
     permanent scar formation which connects the tissue to another organ, and
CC
CC
     are a major source of post-operative morbidity and mortality. No single
CC
     therapeutic approach has, to date, proven universally effective in
CC
     preventing formation of post-operative adhesion formation. The invention
CC
     may have vulnerary activity and may be useful in both humans and vetinary
CC
     applications for the treatment of adhesion formation by gene therapy. The
CC
     compound is useful for treating adhesion formation, or for manufacturing
CC
     a medicament for treating adhesion formation that results from wound,
CC
     surgery, inflammation or trauma. In particular, the compound may be
CC
     useful for preventing, suppressing, ameliorating and/or treating post-
CC
     operative/post-wounding adhesions formations, which may result in
CC
     intestinal obstructions, small bowel obstructions, chronic pelvic pain,
     or infertility in women. The present sequence is the amino acid sequence
CC
     of peptide PR11, a truncated form of hypoxia inducible factor protein
CC
CC
     PR39, which is preferred for the creation of the medicaments of the
CC
     invention.
XX
SQ
     Sequence 11 AA;
  Ouery Match
                          36.4%; Score 4; DB 7; Length 11;
                          100.0%; Pred. No. 1.4e+03;
  Best Local Similarity
  Matches
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRPR 11
Qу
              \mathbf{I}
Db
            2 RRPR 5
RESULT 25
ADC19836
ID
     ADC19836 standard; peptide; 11 AA.
XX
AC
     ADC19836;
XX
DT
     18-DEC-2003 (first entry)
XX
DE
     Fluorescently labelled spaced arginine transport peptide #16.
XX
KW
     Cellular membrane transport peptide; epithelial tissue;
KW
     endothelial tissue; drugs transport; stratum corneum; antibacterial;
KW
     antifungal; antiviral; antiproliferative; immunosuppressive; vitamin;
KW
     analgesic; hormone.
XX
OS
     Synthetic.
XX
FH
                     Location/Qualifiers
FT
     Modified-site
```

```
FT
                     /label
FT
                     /note= "Xaa is fluorescently labelled epsilon-
FТ
                     aminocaprinoic acid"
     Modified-site
FT
FT
                     /label= OTHER
                     /note= "Arg is covalently bound to a CONH2 group"
FT
XX
     US2003032593-A1.
PN
XX
PD
     13-FEB-2003.
XX
     14-FEB-2002; 2002US-00078247.
PF
XX
     16-FEB-2001; 2001US-0269627P.
PR
XX
PA
     (CELL-) CELLGATE INC.
XX
PΙ
     Wender PA, Rothbard JB, Wright L, Kreider EL, Vandeusen CJ;
XX
     WPI; 2003-786846/74.
DR
XX
     Composition used for increasing transport of biologically active compound
PT
PT
     across biological membrane comprises biologically active compound and
PT
     transport group.
XX
PS
     Example 1; Page 9; 33pp; English.
XX
CC
     The invention relates to a composition comprising a biologically active
CC
     compound and a transport group. The transport group comprises a spaced
     poly-Arginine based peptide of formula given in the specification. The
CC
CC
     spaced poly-Arginine based peptide acts as a cellular membrane transport
CC
     signal and effects transport of the biologically active compound across
CC
     the membrane. The conjugate is also useful in therapeutic, prophylactic
CC
     and diagnostic applications. The composition improves the transport of
CC
     biologically active compounds across the biological membrane and into
CC
     animal epithelial or endothelial tissues. The arginine residue of the
CC
     conjugate provides an enhanced transport of drugs and are a part of the
CC
     polypeptide that provides suitable spacing between arginine residues. The
CC
     transport groups deliver an agent across the stratum corneum, which
CC
     previously had been a nearly impenetrable barrier to drug delivery. The
CC
     ability of the conjugate to obtain penetration of skin layers improves
CC
     the efficacy of compounds such as antibacterials, antifungals,
CC
     antivirals, antiproliferatives, immunosuppressives, vitamins, analgesics
CC
     and hormones. The present sequence is a Fluorescently labelled spaced
CC
     arginine transport peptide of the invention.
XX
     Sequence 11 AA;
SQ
  Query Match
                          36.4%; Score 4; DB 7; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
            4; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRPR 11
Qу
              +1111
```

Db

4 RRPR 7

```
RESULT 26
ADC03321
     ADC03321 standard; peptide; 11 AA.
ID
XX
AC
     ADC03321;
XX
     18-DEC-2003 (first entry)
DT
XX
DE
     Synthetic internal peptide #29.
XX
     fatty acid desaturase; ricinoleic acid; plant oil;
KW
KW
     plant lipid composition; fatty acid composition;
     saturated fatty acid reduction; unsaturated fatty acid reduction;
KW
     rapeseed oil; soybean oil.
KW
XX
OS
     Synthetic.
XX
PN
     US2003074694-A1.
XX
     17-APR-2003.
ΡD
XX
     03-APR-2002; 2002US-00115365.
PF
XX
PR
     17-NOV-1992;
                    92US-00977339.
     15-OCT-1993;
                    93WO-US009987.
PR
PR
     20-JUN-1994;
                    94US-00262401.
PR
     14-AUG-1998;
                    98US-00133962.
     26-OCT-2000; 2000US-00697374.
PR
XX
PA
     (LIGH/) LIGHTNER J E.
     (OKUL/) OKULEY J J.
PA
     (HITZ/) HITZ W D.
PΑ
PA
     (KINN/) KINNEY A J.
PΑ
     (YADA/) YADAV N.
PA
     (GRAU/) PEREZ GRAU L.
XX
PΙ
     Lightner JE, Okuley JJ, Hitz WD, Kinney AJ, Yadav N;
PΙ
     Perez Grau L;
XX
DR
     WPI; 2003-615971/58.
XX
PT
     New isolated nucleic acid fragment comprising a sequence encoding a fatty
PT
     acid desaturase or fatty acid desaturase-related enzyme, useful for
PT
     altering fatty acid compositions in rapeseed or soybean plants.
XX
PS
     Disclosure; Page 40; 44pp; English.
XX
CC
     The invention relates to an isolated nucleic acid fragment comprising a
CC
     sequence encoding a fatty acid desaturase or fatty acid desaturase-
CC
     related enzyme. The nucleic acid fragment is useful for making a chimeric
CC
     gene capable of causing altered levels of ricinoleic acid in a
CC
     transformed plant cell, plants containing the chimeric genes, oil
CC
     obtained from the seeds of the plant, RFLP mapping, isolating nucleic
CC
     acid fragments encoding fatty acid desaturases and related enzymes. The
CC
     nucleic acid fragments are useful for altering plant lipid compositions,
CC
     particularly fatty acid compositions by reducing saturated or unsaturated
CC
     fatty acids in rapeseed or soybean oils. The present sequence represents
```

```
CC
     a synthetic internal peptide of the invention.
XX
SQ
     Sequence 11 AA;
 Query Match
                          36.4%; Score 4; DB 7; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+03;
                                                   0; Indels
                                                                              0;
 Matches
            4; Conservative 0; Mismatches
                                                                  0; Gaps
            4 KKTG 7
Qу
              1111
            4 KKTG 7
Db
RESULT 27
AAP40439
     AAP40439 standard; peptide; 11 AA.
XX
AC
     AAP40439;
XX
DT
     25-MAR-2003
                 (revised)
     03-OCT-2002
DT
                 (revised)
DT
     14-FEB-1992 (first entry)
XX
DE
     Sequence of peptide with immunomodulating activity.
XX
KW
     Immunopotentiator; antimicrobial; antiviral; immunomodulator.
XX
OS
     Synthetic.
XX
PN
     EP103858-A.
XX
     28-MAR-1984.
ΡD
XX
PF
     16-SEP-1983;
                    83EP-00109147.
XX
PR
     17-SEP-1982;
                    82JP-00162873.
PR
     25-NOV-1982;
                    82JP-00207335.
XX
PA
     (FUJI ) FUJISAWA PHARM CO LTD.
XX
PI
     Hashimoto M, Hemmi K;
XX
     WPI; 1984-083584/14.
DR
XX
PΤ
     Penta- to tri-deca:peptide(s) - useful as strong immuno-potentiators esp.
PT
     against microbes and viruses.
XX
PS
     Claim 1; Page 82; 87pp; English.
XX
CC
     The first AA of each claimed peptide is bonded to H and the final AA is
CC
     bonded to OH. The peptides are useful as antimicrobial and antiviral
     agents. Dose is 0.1-1000 mg/kg. daily. (Updated on 03-OCT-2002 to add
CC
CC
     missing OS field.) (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 1; Length 11;
```

```
Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
           3; Conservative 0; Mismatches
                                                  0; Indels
                                                                   0; Gaps
  Matches
            4 KKT 6
Qу
              \mathbf{1}\mathbf{1}\mathbf{1}
Db
            5 KKT 7
RESULT 28
AAP50159
     AAP50159 standard; protein; 11 AA.
XX
AC
     AAP50159;
XX
DT
     30-NOV-1991 (first entry)
XX
     Human interferon-gamma (gamma-IFN) peptide corresp. to a slab SDS-PAGE
DE
     mol. wt. of 26,000 +/- 3000 daltons.
\mathsf{DE}
XX
KW
     Gamma-interferon; virucide; antitumour; immunostimulant.
XX
OS
     Homo sapiens.
XX
PN
     EP137691-A.
XX
     17-APR-1985.
PD
XX
PF
     28-AUG-1984;
                    84EP-00305859.
XX
PR
     29-AUG-1983;
                    83US-00527209.
XX
     (MELO-) MELOY LAB INC.
PΑ
     (MERO-) MEROY LAB INC.
PΑ
XX
     Braude IA;
PΙ
XX
DR
     WPI; 1985-094592/16.
XX
     Homogeneous human interferon-gamma - obtd. by incubation of leukocytes,
PT
PT
     inducer and modulator for inducer.
XX
PS
     Claim 10; Page 53; 59pp; English.
XX
     The inventors claim a method for the production of gamma-IFN by
CC
     incubation of leukocytes, inducer and modulator for inducer. They also
CC
     claim species of homogeneous human interferon-gamma characterised by the
CC
CC
     partial AA sequences in AAP50157 or AAP50159
XX
SO
     Sequence 11 AA;
                           27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
                                                                                0;
             3; Conservative 0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
            5 KTG 7
Qγ
               111
Db
            8 KTG 10
```

```
RESULT 29
AAP82336
     AAP82336 standard; peptide; 11 AA.
XX
AC
     AAP82336;
XX
DT
     13-NOV-1990 (first entry)
XX
     Compound in vaccine against Plasmodium falciparum malaria (Formula I).
DE
XX
     Malaria vaccines; polymers; Plasmodium falciparum; asexual blood stage;
KW
KW
     human parasite.
XX
OS
     Synthetic.
XX
     EP275196-A.
PN
XX
     20-JUL-1988.
PD
XX
                    88EP-00300262.
     13-JAN-1988;
PF
XX
     14-JAN-1987;
                    87US-00003194.
PR
                    87US-00135027.
PR
     29-DEC-1987;
XX
PA
     (PATA/) PATARROYO M E.
XX
PΙ
     Patarroyo ME;
XX
     WPI; 1988-199632/29.
DR
XX
PT
     New peptide(s) and peptide polymers - useful for prodn. of malaria
PT
     vaccines.
XX
     Claim 15 (I); Page 13; 13pp; English.
PS
XX
     The peptide is a vaccine component against the asexual blood stage of the
CC
     malaria parasite. It is the synthetic hybrid protein SPf 35.1 peptide of
CC
     8 amino acids except for the abscence of the first three residues. The
CC
CC
     peptide is an alpha hydrophilic structure, and the compound even on its
CC
     own elicits antibodies delaying the appearance of parasitaemia in some
     vaccinated animals. Mixtures of the peptides of AAP82336-P82340 provide
CC
CC
     complete immunity
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
             3; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            3 NKK 5
Qу
              111
Db
            6 NKK 8
```

```
AAP82811
     AAP82811 standard; peptide; 11 AA.
ID
XX
     AAP82811;
AC
XX
     06-DEC-1990 (first entry)
DT
XX
     Peptide fragment of Plasmodium proteins used in antimalaria vaccines (I).
DE
XX
KW
     Plasmodium; antimalarial vaccine; parasite.
XX
OS
     Synthetic.
XX
     US4735799-A.
PN
XX
PD
     05-APR-1988.
XX
                   87US-00003194.
     14-JAN-1987;
PF
XX
     29-DEC-1987;
                  87US-00135027.
PR
XX
     (PATA/) PATARROYO M E.
PA
XX
PI
     Patarroyo ME;
XX
DR
     WPI; 1988-112448/16.
XX
     New peptide fragments of Plasmodium proteins - useful for prodn. of
PT
PT
     antimalarial vaccines.
XX
     Claim 1; Page 9; 6pp; English.
PS
XX
CC .
     This peptide is an alpha hydrophilic structure corresponding to the amino
     terminal parts of the protein molecule 35 kD. Vaccines contain (I), (II)
CC
CC
     and (III); AAP82811, AAP82812 and AAP82812 resp; in a wt. ratio of (1-
CC
     10):(1-10):(1-10), esp. 1:1:1, in normal saline soln. or squalene.
     Immunogenic activity may be increased by coupling (I)-(III) to bovine
CC
CC
     serum albumin with gluteraldehyde or by coupling (I)-(III) by
     copolymerisation. The peptides (I)-(V); AAP82811-15; provide partial
CC
     immunity to malaria caused by Plasmodium falciparum. Combinations of (I)-
CC
CC
     (III) provide complete immunity in Aotos monkeys
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                      Gaps
                                                                              0;
  Matches
            3 NKK 5
Qγ
              \mathbf{I}
            6 NKK 8
Db
RESULT 31
AAP90842
ID
     AAP90842 standard; protein; 11 AA.
XX
```

```
AC
     AAP90842;
XX
     25-MAR-2003 (revised)
DT
     31-OCT-2002
                  (revised)
DT
DT
     29-JUN-1990
                  (first entry)
XX
DΕ
     New bradykinin analogue with D-Arg, Hyp, beta-(2-thienyl)-Ala and D-Phe.
XX
     Bradykinin analogue; bradykinin antagonist.
KW
XX
OS
     Mammalia.
OS
     Synthetic.
XX
FH
                     Location/Qualifiers
     Key
FT
     Misc-difference 1
FT
                     /label= D-Arg
FT
     Misc-difference 3
FT
                     /label= Hyp
FT
     Misc-difference 5
FT
                     /label= OTHER
FT
                     /note= "beta-(2-thienyl)-Ala"
FT
     Misc-difference 7. .7
                     /label= D-Phe
FT
     Misc-difference 8
FT
FT
                     /label= OTHER
                     /note= "As above"
FT
XX
     W08901781-A.
PN
XX
     09-MAR-1989.
PD
XX
     29-AUG-1988;
PF
                    88WO-US002960.
XX
PR
     02-SEP-1987;
                    87US-00091995.
XX
PA
     (STEW/) STEWART J M.
PΑ
     (NOVA-) NOVA TECHN LTD.
PΆ
     (NOVA-) NOVA TECHN LTD.
XX
PΙ
     Stewart JM, Vavrek RJ;
XX
DR
     WPI; 1989-085401/11.
XX
PT
     New peptide bradykinin analogues - with D-amino acid in 7 position,
PT
     useful as bradykinin antagonists.
XX
PS
     Claim 26; Page 55; 54pp; English.
XX
CC
     It may be prepd. by conventional liq. - or solid-phase peptide synthesis
     methods. It is useful for treating local pain, inflammation and swelling,
CC
     rhinitis, hypotension, asthma, arthritis, diarrhoea, irritable bowel
CC
     syndrome, carcinoid syndrome, angina pain, and anaphylactic or septic
CC
     shock. Pharmaceutical compsns. can be made with it. (Updated on 31-OCT-
CC
CC
     2002 to add missing OS field.) (Updated on 25-MAR-2003 to correct PA
CC
     field.)
XX
SQ
     Sequence 11 AA;
```

```
27.3%; Score 3; DB 1; Length 11;
 Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
                                                                             0;
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
            8 RRP 10
Qу
              111
Db
           1 RRP 3
RESULT 32
AAP90643
    AAP90643 standard; protein; 11 AA.
ID
XX
AC
    AAP90643;
XX
DT
     10-MAR-2003
                  (revised)
     09-AUG-1990 (first entry)
DT
XX
     Signal peptide NOS Synthetic.
DE
XX
    NOS; signal peptide; nucleolus.
KW
XX
os
    Unidentified.
XX
ΡN
     JP01096196-A.
XX
     14-APR-1989.
PD
XX
                    87JP-00252377.
PF
     08-OCT-1987;
XX
                    87JP-00252377.
PR
     08-OCT-1987;
XX
PA
     (HATA/) HATANAKA S.
XX
     WPI; 1989-155085/21.
DR
XX
     New peptide NOS having specific aminoacid sequence - used to localise
PT
PT
     protein in nucleolus.
XX
PS
     Claim 1; Page 1; 12pp; Japanese.
XX
     The peptide is useful for localising a protein in the nucleolus. DNA
CC
     encoding it is inserted downstream of promoter in a plasmid to give pNOS
CC
     Synthetic. DNA encoding an opt protein is also ligated into the vector,
CC
     and the pNOS introduced to a host (eg E.coli). Plasmid DNA is then
CC
     extracted from the cells and transfected into eukaryotic cells which have
CC
     a nucleolus. Protein localisation can be detected immunologically within
CC
     hours. See also AAP90642-4. (Updated on 10-MAR-2003 to add missing OS
CC
CC
     field.)
XX
     Sequence 11 AA;
SO
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
```

```
8 RRP 10
Qу
              III
            8 RRP 10
Db
RESULT 33
AAR09490
     AAR09490 standard; peptide; 11 AA.
ID
XX
     AAR09490;
AC
XX
     25-MAR-2003 (revised)
DT
     17-JUN-1993 (first entry)
DT
XX
     Bradykinin antagonist having D-Tic (41).
_{
m DE}
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
os
     Synthetic.
XX
                      Location/Qualifiers
FH
     Key
     Misc-difference 1
FT
                     /note= "D-form residue"
FT
     Modified-site
FT
                      /note= "hydroxyproline"
FT
FT
     Modified-site
                      /label= OTHER
FT
                      /note= "2-thienylalanyl"
FT
FT
     Modified-site
FT
                      /label= OTHER
                      /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
XX
PN
     EP370453-A.
XX
PD
     30-MAY-1990.
XX
PF
     21-NOV-1989;
                    89EP-00121498.
XX
PR
     19-MAY-1989;
                    89DE-03916291.
                    89DE-03918225.
PR
     03-JUN-1989;
XX
PΑ
     (FARH ) HOECHST AG.
XX
PI
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PI
     Scholkens B, Fehihaber HW;
XX
     WPI; 1990-165194/22.
DR
XX
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
PT
     hypotension, etc.
XX
PS
     Example 41; Page 16; 34pp; German.
XX
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
```

condition where bradykinin or its analogues are involved, e.g. wounds,

CC

```
burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 \text{ mg/ml} and the systemic dose is 0.01-10 \text{ mg/ml}. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
CC
XX
     Sequence 11 AA;
SQ
                           27.3%; Score 3; DB 2; Length 11;
  Query Match
                           100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
             3; Conservative 0; Mismatches
                                                     0;
                                                        Indels
                                                                    0; Gaps
                                                                                0;
  Matches
            8 RRP 10
Qу
              \Pi\Pi
            1 RRP 3
Db
RESULT 34
AAR09489
     AAR09489 standard; peptide; 11 AA.
ID
XX
AC
     AAR09489;
XX
DT
     25-MAR-2003
                  (revised)
DT
     17-JUN-1993
                  (first entry)
XX
     Bradykinin antagonist having D-Tic (40).
DE
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
OS
     Synthetic.
XX
FH
     Key
                      Location/Qualifiers
FT
     Misc-difference 1
                      /note= "D-form residue"
FT
FT
     Modified-site
FT
                      /note= "hydroxyproline"
FT
     Modified-site
FT
                      /label= OTHER
                      /note= "2-thienylalanyl"
FT
FT
     Modified-site
FT
                      /label= bALA
     Modified-site
FT
FT
                      /label= OTHER
                      /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
FT
     Modified-site
                      10
FT
                      /label= OTHER
                      /note= "cis, endo-2-azabicyclo[3.3.0]octane -3-S-carbonyl"
FΤ
XX
PN
     EP370453-A.
XX
     30-MAY-1990.
PD
XX
PF
     21-NOV-1989;
                     89EP-00121498.
XX
PR
     19-MAY-1989;
                     89DE-03916291.
PR
     03-JUN-1989;
                     89DE-03918225.
```

```
XX
     (FARH ) HOECHST AG.
PA
XX
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PI
PΙ
     Scholkens B, Fehihaber HW;
XX
     WPI; 1990-165194/22.
DR
XX
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
     hypotension, etc.
XX
     Example 40; Page 16; 34pp; German.
PS
XX
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
     condition where bradykinin or its analogues are involved, e.g. wounds,
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
CC
XX
     Sequence 11 AA;
SQ
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            8 RRP 10
QУ
              IIII
            1 RRP 3
Db
RESULT 35
AAR09485
ID
     AAR09485 standard; peptide; 11 AA.
XX
AC
     AAR09485;
XX
DT
     25-MAR-2003 (revised)
     17-JUN-1993 (first entry)
DT
XX
DE
     Bradykinin antagonist having D-Tic (36).
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
OS
     Synthetic.
XX
                     Location/Qualifiers
FH
FT
     Misc-difference 1
                     /note= "D-form residue"
FT
FT
     Modified-site
FT
                     /note= "hydroxyproline"
FT
     Modified-site
FT
                     /label= OTHER
                     /note= "2-thienylalanyl"
FT
FT
     Modified-site
```

```
FT
                     /label= OTHER
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
XX
     EP370453-A.
PN
XX
PD
     30-MAY-1990.
XX
     21-NOV-1989;
                    89EP-00121498.
PF
XX
PR
     19-MAY-1989;
                    89DE-03916291.
     03-JUN-1989;
                    89DE-03918225.
PR
XX
PΑ
     (FARH ) HOECHST AG.
XX
PΙ
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PΙ
     Scholkens B, Fehihaber HW;
XX
     WPI; 1990-165194/22.
DR
XX
PT
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
     hypotension, etc.
XX
PS
     Example 36; Page 16; 34pp; German.
XX
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
CC
     condition where bradykinin or its analogues are involved, e.g. wounds,
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
CC
     2003 to correct PI field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
  Matches
          3; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRP 10
Qу
              \mathbf{I}
            1 RRP 3
Db
RESULT 36
AAR09463
ID
     AAR09463 standard; peptide; 11 AA.
XX
AC
     AAR09463;
XX
DT
     25-MAR-2003 (revised)
DT
     17-JUN-1993 (first entry)
XX
DE
     Bradykinin antagonist having D-Tic (14).
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
```

```
Synthetic.
OS
XX
                     Location/Qualifiers
FH
     Kev
     Misc-difference 1
FT
                     /note= "D-form residue"
FT
FT
     Modified-site
FT
                     /note= "hydroxyproline"
     Modified-site
FT
FT
                     /label= OTHER
FT
                     /note= "2-thienylalanyl"
FT
    Modified-site
FT
                     /label= OTHER
FT
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
XX
PN
     EP370453-A.
XX
PD
     30-MAY-1990.
XX
PF
     21-NOV-1989;
                    89EP-00121498.
XX
PR
     19-MAY-1989;
                    89DE-03916291.
PR
     03-JUN-1989;
                    89DE-03918225.
XX
PΑ
     (FARH ) HOECHST AG.
XX
PI
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PΙ
     Scholkens B, Fehihaber HW;
XX
DR
    WPI; 1990-165194/22.
XX
PT
    New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
     hypotension, etc.
XX
PS
     Example 14; Page 13; 34pp; German.
XX
CC
    The peptide is a bradykinin antagonist, so is useful for treating any
     condition where bradykinin or its analogues are involed, e.g. wounds,
CC
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
    2003 to correct PI field.)
XX
SQ
    Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
            3; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRP 10
Qy
              111
            1 RRP 3
RESULT 37
```

AAR09488

AAR09488 standard; peptide; 11 AA.

```
XX
     AAR09488;
AC
XX
     25-MAR-2003 (revised)
DT
DT
     17-JUN-1993 (first entry)
XX
DE
     Bradykinin antagonist having D-Tic (39).
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
XX
OS
     Synthetic.
XX
FH
                     Location/Qualifiers
     Key
FT
     Misc-difference 1
                      /note= "D-form residue"
FT
FT
     Modified-site
FT
                     /note= "hydroxyproline"
FT
     Modified-site
FT
                     /label= OTHER
FT
                     /note= "2-thienylalanyl"
     Modified-site
FT
FT
                     /label= bALA
FT
     Modified-site
FT
                     /label= OTHER
FT
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
     Modified-site
                     /label= OTHER
FT
                     /note= "cis,endo-2-azabicyclo[3.3.0]octane -3-S-carbonyl"
FT
XX
PN
     EP370453-A.
XX
PD
     30-MAY-1990.
XX
PF
     21-NOV-1989;
                    89EP-00121498.
XX
PR
     19-MAY-1989;
                    89DE-03916291.
PR
     03-JUN-1989;
                    89DE-03918225.
XX
     (FARH ) HOECHST AG.
PΑ
XX
PΙ
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PI
     Scholkens B, Fehihaber HW;
XX
     WPI; 1990-165194/22.
DR
XX
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
     hypotension, etc.
XX
     Example 39; Page 16; 34pp; German.
PS
XX
CC
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
     condition where bradykinin or its analogues are involved, e.g. wounds,
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
CC
     0.01-5~\mathrm{mg/ml} and the systemic dose is 0.01-10~\mathrm{mg/ml}. (Updated on 25-MAR-
```

```
CC
     2003 to correct PI field.)
XX
     Sequence 11 AA;
SQ
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRP 10
Qу
              \Pi\Pi
            1 RRP 3
Db
RESULT 38
AAR09491
     AAR09491 standard; peptide; 11 AA.
XX
AC
    AAR09491;
XX
DT
     25-MAR-2003 (revised)
DT
     17-JUN-1993 (first entry)
XX
     Bradykinin antagonist having D-Tic (42).
DE
XX
KW
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
     Synthetic.
OS
XX
FH
     Key
                     Location/Qualifiers
    Misc-difference 1
FT
                     /note= "D-form residue"
FT
FT
     Modified-site
FT
                     /note= "hydroxyproline"
FT
    Modified-site
FT
                     /label= OTHER
FT
                     /note= "2-thienylalanyl"
FT
     Modified-site
FT
                     /label= OTHER
FT
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
XX
PN
     EP370453-A.
XX
PD
     30-MAY-1990.
XX
PF
     21-NOV-1989;
                    89EP-00121498.
XX
                    89DE-03916291.
PR
     19-MAY-1989;
PR
     03-JUN-1989;
                    89DE-03918225.
XX
PA
     (FARH ) HOECHST AG.
XX
PΙ
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
     Scholkens B, Fehihaber HW;
PΙ
XX
     WPI; 1990-165194/22.
DR
XX
```

```
New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
PT
     hypotension, etc.
XX
     Example 42; Page 16; 34pp; German.
PS
XX
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
     condition where bradykinin or its analogues are involved, e.g. wounds,
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
CC
XX
SO
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
                               0; Mismatches
                                                       Indels
                                                                  0; Gaps
                                                                               0;
             3; Conservative
            8 RRP 10
Qу
              \perp
            1 RRP 3
Db
RESULT 39
AAR09486
     AAR09486 standard; peptide; 11 AA.
ID
XX
AC
     AAR09486;
XX
DT
     25-MAR-2003 (revised)
DΤ
     17-JUN-1993 (first entry)
XX
     Bradykinin antagonist having D-Tic (37).
DE
XX
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
     Synthetic.
OS
XX
                      Location/Qualifiers
FΗ
     Key
     Misc-difference 1
FT
                      /note= "D-form residue"
FΤ
FT
     Modified-site
                      /note= "hydroxyproline"
FT
     Modified-site
FΤ
                      /label= OTHER
FT
                      /note= "2-thienylalanyl"
FT
     Modified-site
FT
                      /label= OTHER
FT
                      /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
XX
PN
     EP370453-A.
XX
 PD
      30-MAY-1990.
 XX
      21-NOV-1989; 89EP-00121498.
 PF
```

```
XX
     19-MAY-1989;
                    89DE-03916291.
PR
     03-JUN-1989;
                    89DE-03918225.
PR
XX
     (FARH ) HOECHST AG.
PA
XX
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PΙ
     Scholkens B, Fehihaber HW;
PI
XX
     WPI; 1990-165194/22.
DR
XX
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
PT
     hypotension, etc.
XX
PS
     Example 37; Page 16; 34pp; German.
XX
     The peptide is a bradykinin antagonist, so is useful for treating any
CC
     condition where bradykinin or its analogues are involved, e.g. wounds,
CC
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                           27.3%; Score 3; DB 2; Length 11;
                           100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
                                  0; Mismatches
                                                     0; Indels
                                                                        Gaps
                                                                                0;
  Matches
             3; Conservative
            8 RRP 10
Qу
               \mathbf{I} \cdot \mathbf{I} \cdot \mathbf{I}
            1 RRP 3
RESULT 40
AAR09461
ID
     AAR09461 standard; peptide; 11 AA.
XX
AC
     AAR09461;
XX
DT
     25-MAR-2003
                  (revised)
DT
     17-JUN-1993
                  (first entry)
XX
DE
     Bradykinin antagonist having D-Tic (12).
XX
KW
     1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
OS
     Synthetic.
XX
                      Location/Qualifiers
FH
     Kev
FT
     Misc-difference 1
FΤ
                      /note= "D-form residue"
FT
     Modified-site
                      /note= "hydroxyproline"
FT
FT
     Modified-site
```

```
FT
                     /label= OTHER
                     /note= "2-thienylalanyl"
FΤ
     Modified-site
FT
                     /label= OTHER
FT
FT
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
XX
PN
     EP370453-A.
XX
     30-MAY-1990.
PD
XX
                    89EP-00121498.
PF
     21-NOV-1989;
XX
     19-MAY-1989;
                    89DE-03916291.
PR
     03-JUN-1989;
                    89DE-03918225.
PR
XX
PA
     (FARH ) HOECHST AG.
XX
ΡI
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
ΡI
     Scholkens B, Fehihaber HW;
XX
     WPI; 1990-165194/22.
DR
XX
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
PT
     hypotension, etc.
XX
PS
     Example 12; Page 13; 34pp; German.
XX
CC
     The peptide is a bradykinin antagonist, so is useful for treating any
     condition where bradykinin or its analogues are involed, e.g. wounds,
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches
                                                                              0;
  Matches
                                                   0; Indels
                                                                 0; Gaps
Qy
            8 RRP 10
              \perp
            1 RRP 3
Dh
RESULT 41
AAR09464
ID
     AAR09464 standard; peptide; 11 AA.
XX
AC
     AAR09464;
XX
DT
     25-MAR-2003 (revised)
DT
     17-JUN-1993 (first entry)
XX
DE
     Bradykinin antagonist having D-Tic (15).
XX
```

```
1,2,3,4-tetrahydroisoquinoline-3-ylcarbonyl; wound; burns; erythema;
KW
     oedema; angina; asthma; allergy; inflammation; hypotension.
KW
XX
     Synthetic.
OS
XX
FΗ
                     Location/Qualifiers
     Key
     Misc-difference 1
FT
                      /note= "D-form residue"
FT
FT
     Modified-site
                     /note= "hydroxyproline"
FT
FT
     Modified-site
\mathbf{FT}
                     /label= OTHER
                     /note= "2-thienylalanyl"
\mathbf{FT}
FT
     Modified-site
FT
                      /label= bALA
FT
     Modified-site
FT
                     /label= OTHER
                     /note= "D-tetrahydroisoquinoline-3-ylcarbonyl"
FT
XX
     EP370453-A.
PN
XX
     30-MAY-1990.
PD
XX
PF
     21-NOV-1989;
                    89EP-00121498.
XX
PR
     19-MAY-1989;
                    89DE-03916291.
                    89DE-03918225.
PR
     03-JUN-1989;
XX
     (FARH ) HOECHST AG.
PA
XX
PI
     Henke S, Anagnostop H, Breipohl G, Knolle J, Stechel J;
PΙ
     Scholkens B, Fehihaber HW;
XX
DR
     WPI; 1990-165194/22.
XX
PT
     New oligopeptide with tetra:hydro:isoquinoline-carboxylic acid residue -
PT
     antagonists of bradykinin, for treating e.g. wounds, asthma, allergy,
PT
     hypotension, etc.
XX
PS
     Example 15; Page 13; 34pp; German.
XX
CC
     The peptide is a bradykinin antagonist, so is useful for treating any
     condition where bradykinin or its analogues are involed, e.g. wounds,
CC
CC
     burns, erythema, oedema, angina, asthma, allergy, inflammation,
CC
     hypotension, etc. Compsns. for topical application or inhalation contain
CC
     0.01-5 mg/ml and the systemic dose is 0.01-10 mg/ml. (Updated on 25-MAR-
CC
     2003 to correct PI field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                           27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches
                                                     0; Indels
                                                                       Gaps
                                                                                0;
            8 RRP 10
Qу
              \mathbf{H}
Db
            1 RRP 3
```

```
RESULT 42
AAR03387
     AAR03387 standard; protein; 11 AA.
XX
     AAR03387;
AC
XX
                 (revised)
DT
     25-MAR-2003
     31-JUL-1990 (first entry)
DT
XX
     Fragment of pertussis toxin S1 subunit.
DE
XX
     Whooping chough; subunit S1; vaccine.
KW
XX
os
     Bordetella pertussis.
XX
PN
     WO9001494-A.
XX
PD
     22-FEB-1990.
XX
                    89WO-US003298.
ΡF
     31-JUL-1989;
XX
     02-AUG-1988;
                   88US-00227372.
PR
XX
     (STRD ) UNIV LELAND STANFORD JUNIOR.
PΑ
XX
     Steinman L, Oksenberg JR, Schoolnik GK,
                                                Judd AK;
PΙ
XX
DR
     WPI; 1990-083476/11.
XX
     Polypeptide(s) useful as Bordetella pertussis vaccines - comprise
PT
PT
     specified sequence(s) of S1 subunit.
XX
PS
     Disclosure; Page ?; 41pp; English.
XX
CC
     Useful as a vaccine for whooping cough, free from the side effects
CC
     associated with the intact S1 subunit. (Updated on 25-MAR-2003 to correct
     PF field.) (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-
CC
     MAR-2003 to correct DR field.)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
                                                                              0;
            3; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
            6 TGR 8
Qу
              \mathbf{I}
            8 TGR 10
RESULT 43
AAR05912
ID
     AAR05912 standard; protein; 11 AA.
XX
AC
    AAR05912;
```

```
XX
     31-OCT-2002 (revised)
DΤ
     26-NOV-1990 (first entry)
DT
XX
DΕ
     Partial sequence of GAP-43 associated protein p34-A.
XX
     Internal regulatory protein; IRP; neuronal growth related peptide;
KW
     GAP-43; membrane targetting peptide; MTP; ischaemia; hypoxia; stroke.
KW
XX
os
     Homo sapiens.
XX
     WO9006948-A.
PN
XX
     28-JUN-1990.
PD
XX
PF
     22-DEC-1988;
                    88US-00288604.
XX
                    88US-00288604.
PR
     22-DEC-1988;
                    89US-00305239.
     02-FEB-1989;
PR
PR
     01-SEP-1989;
                    89US-00401408.
XX
     (FISH/) FISHMAN M C.
PΑ
XX
PI
     Fishman MC, Zuber MX, Strittmat SM, Valenzuela D;
XX
DR
     WPI; 1990-224493/29.
XX
     Mammalian neuronal growth peptide GAP-43 and corresp. DNA - also new
PT
PT
     membrane targetting and internal regulatory peptide(s), useful e.g. for
     neuronal modelling and healing neural tissue damage.
PT
XX
PS
     Example 8; Fig 16; 9pp; English.
XX
CC
     GAP-43 is useful in structural remodelling of neural cells and treatment
CC
     of ishaemia, hypoxia, stroke and other neural tissue damage. (Updated on
CC
     31-OCT-2002 to add missing OS field.)
XX
SO
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
             3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
            2 TNK 4
QУ
              | | |
            9 TNK 11
RESULT 44
AAR08092
ID
     AAR08092 standard; protein; 11 AA.
XX
AC
     AAR08092;
XX
DT
     25-MAR-2003
                  (revised)
DT
     01-MAR-1991 (first entry)
XX
```

```
Antifreeze segment #2 encoded by SS3.
DE
XX
     synthetic antifreeze polypeptide; cryopreservation;
KW
     core repetitive sequence.
KW
XX
OS
     Synthetic.
XX
PN
     WO9013571-A.
XX
     15-NOV-1990.
PD
XX
                    89US-00350481.
PF
     10-MAY-1989;
XX
                    89US-00350481.
PR
     10-MAY-1989;
                    90US-00507716.
     10-APR-1990;
PR
XX
     (DNAP ) DNA PLANT TECHN COR.
PA
XX
     Warren GJ, Mueller JM, Mckown RJ, Dunsmuir P;
PΙ
XX
     WPI; 1990-361428/48.
DR
XX
     New anti-freeze poly-peptide(s) - used for cryo-protection of e.g. foods,
PT
     medically used biological(s), plant prods. or plants during growth.
PT
XX
     Disclosure; Fig 4; 111pp; English.
PS
XX
     Synthetic anti-freeze polypeptides (saf) comprise a specifically
CC
     cleavable site and a region containing at least two "core" segments such
CC
     as the 11mer given here. The saf's suppress ice crystal growth by binding
CC
     to the growing crystal face and blocking sites for further crystal
CC
     growth. They can be used to maximise retention of important properties of
CC
     organic materials through freezing and thawing processes. The basic
CC
     design of the polypeptides is based on known antifreeze polypeptides from
CC
     insects and fish, e.g. the winter flounder. See also AAQ06649-Q06652,
CC
     AAQ06656, AAQ06658, AAQ06660-Q06672, AAR08070-6, AAR08087-R08091,
CC
     AAR08093. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-
CC
     MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI
CC
CC
     field.)
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            3; Conservative 0; Mismatches
  Matches
            4 KKT 6
Qу
              9 KKT 11
Db
RESULT 45
AAR28593
     AAR28593 standard; protein; 11 AA.
XX
AC
     AAR28593;
XX
```

```
DT
     25-MAR-2003
                  (revised)
DТ
     03-APR-1993 (first entry)
XX
     Partial sequence of growth cone membrane fraction p-34-A which is
DE
DE
     identical to beta 1 79-89 and beta 2 79-89.
XX
KW
     Neuronal growth-related protein; axon; GAP-43 protein.
XX
OS
     Rattus rattus.
XX
PN
     WO9218138-A1.
XX
     29-OCT-1992.
PD
XX
                    92WO-US003014.
PF
     10-APR-1992;
XX
     10-APR-1991;
                    91US-00683455.
PR
XX
     (GEHO ) GEN HOSPITAL CORP.
PΑ
XX
     Fishman MC, Federoff HJ, Zuber MX, Strittmatter SM, Valenzuela D;
PΙ
XX
     WPI; 1992-381769/46.
DR
XX
     Recombinant mammalian GAP-43 - used in the study, diagnosis and treatment
РΨ
     of damaged, diseased or dysfunctional nervous system tissue.
РΤ
XX
     Example; Fig 16; 191pp; English.
PS
XX
     A growth cone membrane fraction was prepd. from neonatal rat brain.
CC
     Prominent proteins with Mrs of about 35,000 and 40,000 have been termed
CC
     p34 and p38, and are specifically enriched in the growth cone membrane.
CC
CC
     It was noted that p34 and p38 have similar mol. wts. to the alpha and
CC
     beta subunits of the GTP-binding protein GO. Co-electrophoresis of the
CC
     growth cone membranes with purified bovine grain GO demonstrated that p34
CC
     co-migrates with the beta subunit, and p38 with the alpha subunit of G0.
CC
     Partial protein sequences were obtained from electrophoretically purified
     p34 and p38. The sequence for each of three peptides from p38 was
CC
     identical to that of alpha0. The three p34 peptides had a sequence
CC
     identical to that of the beta subunit of G proteins. (Updated on 25-MAR-
CC
CC
     2003 to correct PN field.)
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                     Gaps
                                                                              0;
  Matches
Qy
            2 TNK 4
              III
            9 TNK 11
Db
RESULT 46
AAR25458
     AAR25458 standard; protein; 11 AA.
XX
```

```
AAR25458;
AC
XX
DΤ
     25-MAR-2003 (revised)
     15-JAN-1993 (first entry)
DT
XX
     wohl-5.
DE
XX
KW
     PF4; Behcet's disease; angiogenic response.
XX
OS
     Synthetic.
XX
    WO9211021-A1.
PN
XX
     09-JUL-1992.
PD
XX
     20-DEC-1991;
                    91WO-US009813.
PF
XX
PR
     21-DEC-1990;
                    90US-00631823.
XX
     (CURA-) CURATIVE TECHNOLOGIES INC.
PA
XX
     Whitman RB, Wohl R, Duff RG;
PΙ
XX
DR
     WPI; 1992-249845/30.
XX
PT
     New angiogenic peptide(s) derived from platelet factor 4 - used to
PT
     promote wound healing in patients with vascular insufficiency, diabetes,
PT
     pressure ulcers etc.
XX
PS
     Claim 10; Page 23; 39pp; English.
XX
CC
     The sequences given in AAR25454-61 angiogenic peptides which are derived
     from platelet faactor 4 (PF4). PF4 is a 70 amino acid heparin-binding
CC
CC
     protein and is released from the alpha granules of activated platelets.
CC
     Increased levels of PF4 have been found in diabetic patients and in
     patients with Behcet's disease. The peptide sequences given are capable
CC
     of inducing an angiogenic response in vivo. These peptides may be
CC
CC
     particularly useful in promoting wound healing, including incisional
CC
     healing, bone repair, burn healing, and post-infarction repair in
CC
     myocardial or central nervous system injury; and the assimilation of
CC
     grafted tissues, particularly in persons suffering from vascular
     insufficiency, such as diabetic patients. (Updated on 25-MAR-2003 to
CC
CC
     correct PN field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
                                                   0; Indels
                                                                              0;
  Matches
            3; Conservative 0; Mismatches
                                                                  0; Gaps
            9 RPR 11
Qv
              \mathbf{I}
Dh
            6 RPR 8
```

RESULT 47 AAR26211

```
AAR26211 standard; peptide; 11 AA.
ID
XX
     AAR26211;
AC
XX
     25-MAR-2003 (revised)
DT
DT
     28-JAN-1993 (first entry)
XX
     Sequence of angiogenic peptide derived from platelet factor 4 (PF4).
DE
XX
KW
    Angiogenic peptide; wound healing; platelet factor 4; vascularisation.
XX
OS
    Synthetic.
XX
                     Location/Qualifiers
FH
     Kev
FT
    Misc-difference 6. .9
FT
                     /note= "claimed fragment"
XX
PN
    WO9213874-A2.
XX
PD
    20-AUG-1992.
XX
PF
     02-JAN-1992;
                  92WO-US000099.
XX
PR
    02-JAN-1991; 91US-00636798.
XX
PΑ
     (FOXC-) FOX CHASE CANCER CENT.
XX
PΙ
    Mintz B;
XX
DR
    WPI; 1992-299977/36.
XX
    New peptide(s) derived from platelet factor 4 - have angiogenic activity,
PT
PT
    useful in treating vascular insufficiency, diabetes and for wound
PT
    healing.
XX
    Claim 10; Page 19; 22pp; English.
PS
XX
    An octapeptide derived from platelet factor 4 and seven structurally
CC
     related peptides (see AAR26210-12) are capable of inducing an angiogenic
CC
CC
     response in vivo as measured by neovascularization in rabbit corneal
CC
     implant assay and by measurement of capillary endothelial cell
CC
     chemoattraction. The angiogenic peptides may be particularly useful in
CC
     promoting wound healing, and the assimilation of grafted tissues.
CC
     (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ
    Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.4e+04;
 Matches
                              0; Mismatches
                                                   0; Indels
                                                                             0;
           3; Conservative
                                                                 0; Gaps
            9 RPR 11
Qу
              Db
            6 RPR 8
```

```
AAR37243
ID.
    AAR37243 standard; peptide; 11 AA.
XX
AC
     AAR37243;
XX
     10-MAR-2003
                  (revised)
DT
DT
     06-SEP-1993 (first entry)
XX
DE
     IL-6 antagonist peptide #27.
XX
KW
     IL-6; antagonist; cytokine; B cell differentiation; inflammation;
KW
     tissue injury; B9.9 hybridoma cell line; Castleman's Disease;
     Lennart's T-cell lymphoma; Non-Hodgkin's lymphoma; allergy;
KW
     immune deficiency disease; cardiac myxoma;
KW
KW
     mesangial proliferative glomerulonephritis.
XX
OS
     Homo sapiens.
OS
     Synthetic.
XX
PN
    US5210075-A.
XX
PD
     11-MAY-1993.
XX
ΡF
     16-FEB-1990;
                  90US-00480868.
XX
PR
     16-FEB-1990;
                  90US-00480868.
XX
PA
     (TANA ) TANABE SEIYAKU CO.
XX
PΙ
     Scholz W, Chiang S, Nagarajan G, Lobl TJ;
XX
DR
    WPI; 1993-166970/20.
XX
PT
    New peptide interleukin-6 antagonists - for treating and preventing auto-
PT
     immune, immuno:inflammatory, neoplastic and infectious diseases etc.
XX
PS
    Example 3; Col 27; 20pp; English.
XX
CC
    This peptide is a specific example of a highly generic claimed formula
     covering sequences derived from the p51-70 portion (i.e the IL-6 receptor
CC
CC
     -binding portion) of IL-6 (see AAR37216) or modelled after different
CC
     portions of this sequence. In an assay to determine IL-6 antagonist
     activity of this peptide, proliferation of the IL-6 dependent B9.9
CC
CC
    hybridoma cell line (J.Immunol. 139: 4116, 1987) was inhibited by 91 (\pm/-
CC
     2)%. See AAR37216-R37261. (Updated on 10-MAR-2003 to add missing OS
CC
     field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
            3; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            7 GRR 9
Qу
              \mathbf{III}
Db
            9 GRR 11
```

```
RESULT 49
AAR44847
     AAR44847 standard; peptide; 11 AA.
ID
XX
AC
     AAR44847;
XX
     25-MAR-2003 (revised)
DT
     09-JAN-2003
                  (revised)
DT
DТ
     31-JAN-1994 (first entry)
XX
     Lactoferrin-related antibacterial peptide.
DE.
XX
KW
     Lactoferrin; antibiotic; chelate; mastitis; bowel disorder; disease;
     bacteria; yeast; fungi; disinfection; drug; foodstuff; cosmetic;
KW
     toiletries.
KW
XX
     Unidentified.
OS
XX
                     Location/Qualifiers
FH
     Key
FT
     Disulfide-bond
                     /note= "Cys10 forms disulfide bond with Cys35 of sequence
FT
FT
                     in AAR44846"
XX
PN
     WO9314640-A1.
XX
PD
     05-AUG-1993.
XX
PF
     30-NOV-1992;
                   92WO-JP001563.
XX
     23-JAN-1992;
                    92JP-00032660.
PR
     11-MAR-1992;
                    92JP-00052943.
PR
PR
     30-SEP-1992;
                    92JP-00262143.
PR
     30-SEP-1992;
                    92JP-00262559.
XX
PA
     (MORG ) MORINAGA MILK IND CO LTD.
XX
PΙ
                Shimamura S, Kawase K, Fukuwatari Y, Takase M;
PΙ
     Bellamy W,
                Yamauchi K, Wakabayashi H, Tokita Y;
XX
     WPI; 1993-258265/32.
DR
XX
PT
     Antibacterial agent comprising decomposition products of lactoferrin -
     with chelate e.g. EDTA alcohol and/or antibiotic e.g. penicillin, also
РΤ
PT
     useful against yeast and fungi.
XX
PS
     Disclosure; Page 88; 100pp; Japanese.
XX
     Lactoferrin-related peptides are used in new antibacterial compsn. The
CC
     compsn. is highly effective against a broad range of bacteria, yeasts and
CC
     fungi. It can be used therapeutically (internal and external
CC
CC
     application), e.g. for mastitis, bowel disorders, urinary infections,
     etc. It can also be used for the disinfection and protection of drugs,
CC
     foodstuffs, cosmetics and toiletries and household items (such as kitchen
CC
     towels and toilet paper). (Updated on 09-JAN-2003 to add missing OS
CC
     field.) (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
```

```
SO
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
 Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
                                0; Mismatches
                                                       Indels
                                                                  0; Gaps
                                                                               0;
             3; Conservative
                                                    0;
 Matches
            7 GRR 9
Qу
              Db
            1 GRR 3
RESULT 50
AAR38680
     AAR38680 standard; peptide; 11 AA.
ID
XX
AC
     AAR38680;
XX
DT
     25-MAR-2003
                  (revised)
DT
     01-NOV-1993
                 (first entry)
XX
     Bradykinin antagonist (4).
DΕ
XX
KW
     Oedema; pancreas; enzyme; acute pancreatitis; serum amylase; lipase;
KW
     hypovolaemia; hyperalbuminaemia; pain.
XX
OS
     Synthetic.
XX
                     Location/Oualifiers
FΗ
     Key
FT
     Modified-site
FT
                     /note= "(4-benzoyl)benzoyl-Lys"
FT
     Misc-difference 2
                     /note= "D-form residue"
FТ
     Modified-site
FT
FT
                     /note= "hydroxyproline"
FT
     Modified-site
                     /note= "2-thienylalanine"
FT
FT
     Modified-site
                     /note= "D-1,2,3,4 tetrahydroisoquinoline-3-yl-carbonyl"
FT
FT
     Modified-site
FT
                     /note= "cis, endo octahydroindolecarbonyl"
XX
     EP548825-A1.
PN
XX
     30-JUN-1993.
PD
XX
                    92EP-00121558.
     18-DEC-1992;
PF
XX
     21-DEC-1991;
                    91EP-00122055.
PR
XX
     (FARH ) HOECHST AG.
PΑ
XX
     Griesbacher T, Lembeck F;
PI
XX
     WPI; 1993-206998/26.
DR
XX
     Compsn. to treat acute pancreatitis - comprising peptide(s) as bradykinin
РΤ
```

PT

antagonists.

```
XX
     Claim 4; Page 11; 16pp; English.
PS
XX
     This sequence is an example of a highly generic formula. The peptide is a
CC
     bradykinin antagonist which prevents bradykinin-induced oedema and thus
CC
     allows pancreatic enzymes to leave the tissue without hindrance. The
CC
     peptide is useful in the treatment of acute pancreatitis which is
CC
     characterised by a massive oedema of the gland and the retroperitoneal
CC
     tissue, interstitial activation of proteolytic enzymes, elevation of
CC
     serum amylase and lipase levels, hypovolaemia, hyperalbuminaemia,
CC
CC
     pulmonary oedema and severe pain. (Updated on 25-MAR-2003 to correct PN
CC
     field.)
XX
     Sequence 11 AA;
SO
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
             3; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                      Gaps
                                                                              0;
            8 RRP 10
Qу
              111
Db
            2 RRP 4
RESULT 51
AAR33285
ΙD
     AAR33285 standard; protein; 11 AA.
XX
AC
    AAR33285;
XX
DТ
     25-MAR-2003 (revised)
DT
     13-MAY-1993 (first entry)
XX
DΕ
     pDS56/RBSII(-2) produced peptide.
XX
     Plasmid; pDS56/RBSII; -1; -2; regulatable; promoter; operator;
KW
     N25OPSN25OP29; ribosomal binding site; RBS; RBSII; RBSII(-1); RBSII(-2);
KW
     Pg25; E. coli; phage; T5; lac; repressor; lacI; lacIq; pDMI.1;
KW
KW
     replication; beta-lactamase; terminator; lambda; CAT; T1;
KW
     chloramphenicol acetyltransferase; rrnB operon; reading frame.
XX
OS
     Synthetic.
XX
     EP522482-A2.
PN
XX
PD
     13-JAN-1993.
XX
PF
     06-JUL-1992;
                    92EP-00111407.
XX
                    91US-00729099.
     12-JUL-1991;
PR
XX
     (HOFF ) HOFFMANN LA ROCHE & CO AG F.
PA
XX
     Binger M, Pasamontes L;
PΙ
XX
    WPI: 1993-010336/02.
DR
    N-PSDB; AAQ34609.
DR
```

```
XX
PΤ
     Immunogenic specified polypeptide and fragments - capable of inducing an
     immune response against eimeria parasites and free from proteins produced
РΤ
PT
     by these parasites.
XX
     Disclosure; Fig 8; 72pp; English.
PS
XX
CC
     The sequences given in AAR33283-85 represent the peptides which are
CC
     encoded by the open reading frames under the control of the ribosome
CC
     binding sites (RBS) in plasmids pDS56/RBSII, -1, and -2. These plasmids
     contain the regulatable promoter/operator element N250PSN250P29 and the
CC
     RBS's RBSII, RBSII(-1) and RBSII(-2) respectively. These RBS are derived
CC
CC
     from the RBS of the promoter Pg25 of the E. coli phage T5. These plasmids
     may be maintained in E. coli only if the promoter/operator element is
CC
CC
     repressed by the binding of a lac repressor to the operator. The lac
     repressor is encoded by the lacI gene. N25OPSN25OP29 can be repressed
CC
CC
     efficiently only when a sufficient amount of repressor molecules are
CC
     present in the cells. Therefore the lacIq allele, which contains a
CC
     promoter mutant responsible for increased expression of the repressor
CC
     gene was used. This lacIq allele is present on the plasmid pDMI.1
     (AAQ34610). The region of these plasmids between bases 1-1120 contains
CC
CC
     the replication region and the gene for beta-lactamase. The beta-
CC
     lactamase gene is modified by elimination of the HincIII and PstI
CC
     cleavage sites. These plasmids also contain cleavage sites for the
     enzymes SalI, PstI and HindIII, the terminator of E. coli phage lambda,
CC
CC
     the promoter-free gene of chloramphenical acetyltransferase (CAT) and the
CC
     terminator T1 of the E. coli rrnB operon. These plasmids differ by one
CC
     nucleotide following the ATG start codon resulting in protein expressio
     in all three potential reading frames. (Updated on 25-MAR-2003 to correct
CC
CC
     PN field.)
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
  Matches
             3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            8 RRP 10
              \mathbf{I}
            4 RRP 6
RESULT 52
AAR40874
ID
     AAR40874 standard; protein; 11 AA.
XX
AC
     AAR40874;
XX
DT
     24-OCT-2003
                  (revised)
     25-MAR-2003
DT
                  (revised)
DT
     28-MAR-1994
                  (first entry)
XX
     SSP for flavonoid-3',5'-hydroxylase gene.
DE
XX
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
     polymerase chain reaction; amplification; expression; ss.
KW
```

```
XX
OS
     Petunia x hybrida.
XX
     WO9318155-A1.
PN
XX
PD
     16-SEP-1993.
XX
     20-NOV-1992;
                   92WO-JP001520.
PF
XX
PR
     02-MAR-1992;
                    92JP-00044963.
XX
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
PA
XX
                 Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PΙ
     Kikuchi Y,
     Okinaka Y;
PΙ
XX
     WPI; 1993-303469/38.
DR
DR
     N-PSDB; AAQ47875.
XX
PT
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
     colour and altered pigment pattern.
XX
PS
     Claim 11; Page 57; 82pp; Japanese.
XX
CC
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
     which do not occur naturally. The sequences were amplified using primers
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
     coding for the haem-binding region of cytochrome P450 are shown in
CC
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
     on 24-OCT-2003 to standardise OS field)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
  Matches
            3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
            7 GRR 9
Qу
              111
            5 GRR 7
Db
RESULT 53
AAR40872
    AAR40872 standard; protein; 11 AA.
TD
XX
AC
     AAR40872;
XX
DT
     24-OCT-2003 (revised)
DT
     25-MAR-2003 (revised)
DT
     28-MAR-1994 (first entry)
XX
     SSP for flavonoid-3',5'-hydroxylase gene product.
DE
```

```
XX
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
     polymerase chain reaction; amplification; expression.
KW
XX
OS
     Petunia x hybrida.
XX
     WO9318155-A1.
PN
XX
PD
     16-SEP-1993.
XX
PF
     20-NOV-1992;
                   92WO-JP001520.
XX
     02-MAR-1992;
                    92JP-00044963.
PR
XX
PA
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
XX
PΙ
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M,
                                                        Shimada R;
ΡI
     Okinaka Y;
XX
DR
     WPI; 1993-303469/38.
DR
     N-PSDB; AAQ47873.
XX
PT
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
PT
     colour and altered pigment pattern.
XX
PS
     Claim 11; Page 56; 82pp; Japanese.
XX
CC
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
     which do not occur naturally. The sequences were amplified using primers
CC
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
     on 24-OCT-2003 to standardise OS field)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches
 Matches
                                                   0; Indels
                                                                0; Gaps
                                                                             0;
            7 GRR 9
Qу
              5 GRR 7
RESULT 54
AAR41634
ID
    AAR41634 standard; protein; 11 AA.
XX
AC
    AAR41634;
XX
DT
    24-OCT-2003 (revised)
```

```
DT
     25-MAR-2003 (revised)
DT
     28-MAR-1994 (first entry)
XX
DE
     SSP for flavonoid-3',5'-hydroxylase gene product.
XX
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
     polymerase chain reaction; amplification; expression.
KW
XX
os
     Petunia x hybrida.
XX
     WO9318155-A1.
PN
XX
     16-SEP-1993.
PD
XX
PΕ
     20-NOV-1992;
                    92WO-JP001520.
XX
PR
     02-MAR-1992;
                    92JP-00044963.
XX
PΑ
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
XX
PI
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PI
     Okinaka Y;
XX
     WPI; 1993-303469/38.
DR
DR
     N-PSDB; AAQ47883.
XX
PT
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
     colour and altered pigment pattern.
XX
PS
     Claim 11; Page 61; 82pp; Japanese.
XX
CC
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
     which do not occur naturally. The sequences were amplified using primers
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
     on 24-OCT-2003 to standardise OS field)
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative
                                 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
            7 GRR 9
Qу
              III
            5 GRR 7
```

RESULT 55 AAR40878

ID AAR40878 standard; protein; 11 AA.

```
XX
AC
     AAR40878;
XX
DT
     24-OCT-2003
                 (revised)
DT
     25-MAR-2003
                 (revised)
DТ
     28-MAR-1994 (first entry)
XX
     SSP for flavonoid-3',5'-hydroxylase gene product.
DE
XX
KW
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
     polymerase chain reaction; amplification; expression.
KW
XX
     Petunia x hybrida.
OS
XX
     WO9318155-A1.
PN
XX
PD
     16-SEP-1993.
XX
PF
     20-NOV-1992;
                    92WO-JP001520.
XX
                    92JP-00044963.
PR
     02-MAR-1992;
XX
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
PA
XX
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M,
PΙ
                                                        Shimada R;
PΙ
     Okinaka Y;
XX
DR
     WPI; 1993-303469/38.
DR
     N-PSDB; AAQ47879.
XX
PT
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
PT
     colour and altered pigment pattern.
XX
PS
     Claim 11; Page 58; 82pp; Japanese.
XX
CC
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
     which do not occur naturally. The sequences were amplified using primers
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
     on 24-OCT-2003 to standardise OS field)
CC
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
                                0; Mismatches
            3; Conservative
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
Qy
            7 GRR 9
              +111
            5 GRR 7
Db
```

```
RESULT 56
AAR40870
    AAR40870 standard; protein; 11 AA.
ID
XX
AC
    AAR40870;
XX
    24-OCT-2003
DT
                 (revised)
    25-MAR-2003
                 (revised)
DT
    28-MAR-1994 (first entry)
DT
XX
    SSP for flavonoid-3',5'-hydroxylase gene product.
DE
XX
KW
    Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
    tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
    polymerase chain reaction; amplification; expression.
KW
XX
    Petunia x hybrida.
os
XX
    WO9318155-A1.
PN
XX
    16-SEP-1993.
PD
XX
PF
    20-NOV-1992;
                  92WO-JP001520.
XX
    02-MAR-1992; 92JP-00044963.
PR
XX
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
PA
XX
    Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PΙ
    Okinaka Y;
PΤ
XX
DR
    WPI; 1993-303469/38.
DR
    N-PSDB; AAQ47871.
XX
PT
    Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
    transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
    colour and altered pigment pattern.
XX
    Claim 11; Page 55; 82pp; Japanese.
PS
XX
    Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
CC
    petunia, tobacco and carnation, using a suitable vector such as
    agrobacterium, give transformed plants which express the gene, resulting
CC
    in petals with a bluer colour than normal, and/or pigmentation patterns
CC
    which do not occur naturally. The sequences were amplified using primers
CC
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
    coding for the haem-binding region of cytochrome P450 are shown in
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
    on 24-OCT-2003 to standardise OS field)
CC
XX
SQ
    Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.4e+04;
           3; Conservative 0; Mismatches
                                                                 0; Gaps
 Matches
                                                   0; Indels
                                                                             0;
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```
7 GRR 9
Qy
              5 GRR 7
Db
RESULT 57
AAR40871
     AAR40871 standard; protein; 11 AA.
XX
AC
     AAR40871;
XX
     24-OCT-2003 (revised)
DT
\mathbf{DT}
     25-MAR-2003 (revised)
     28-MAR-1994 (first entry)
DT
XX
     SSP for flavonoid-3',5'-hydroxylase gene product.
DE
XX
KW
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
     polymerase chain reaction; amplification; expression.
KW
XX
     Petunia x hybrida.
OS
XX
PN
     WO9318155-A1.
XX
PD
     16-SEP-1993.
XX
PF
     20-NOV-1992;
                    92WO-JP001520.
XX
PR
     02-MAR-1992;
                    92JP-00044963.
XX
PA
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
XX
PΙ
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M,
                                                         Shimada R;
PΙ
     Okinaka Y;
XX
     WPI; 1993-303469/38.
DR
DR
     N-PSDB; AAQ47872.
XX
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
PT
     colour and altered pigment pattern.
XX
     Claim 11; Page 55; 82pp; Japanese.
PS
XX
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
CC
     petunia, tobacco and carnation, using a suitable vector such as
     agrobacterium, give transformed plants which express the gene, resulting
CC
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
     which do not occur naturally. The sequences were amplified using primers
CC
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
     on 24-OCT-2003 to standardise OS field)
CC
XX
```

SQ

Sequence 11 AA;

```
Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
            3: Conservative
                              0; Mismatches
                                                   0: Indels
                                                                  0; Gaps
                                                                              0:
            7 GRR 9
Qy
              \perp
            5 GRR 7
Db
RESULT 58
AAR41635
ID
     AAR41635 standard; protein; 11 AA.
XX
AC
     AAR41635;
XX
     24-OCT-2003 (revised)
DT
DT
     25-MAR-2003
                  (revised)
DT
     28-MAR-1994
                  (first entry)
XX
DE
     SSP for flavonoid-3',5'-hydroxylase gene product.
XX
KW
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
KW
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
     polymerase chain reaction; amplification; expression.
XX
OS
     Petunia x hybrida.
XX
PN
     WO9318155-A1.
XX
PD
     16-SEP-1993.
XX
PF
     20-NOV-1992;
                    92WO-JP001520.
XX
PR
     02-MAR-1992;
                  92JP-00044963.
XX
PA
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
XX
PI
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PΙ
     Okinaka Y;
XX
DR
     WPI; 1993-303469/38.
     N-PSDB; AAQ47885.
DR
XX
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
PT
     colour and altered pigment pattern.
XX
     Claim 11; Page 61; 82pp; Japanese.
PS
XX
CC
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
     petunia, tobacco and carnation, using a suitable vector such as
     agrobacterium, give transformed plants which express the gene, resulting
CC
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
     which do not occur naturally. The sequences were amplified using primers
CC
CC
     (AAQ47843-70). Related single specific primers using a gene sequence
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
```

```
on 24-OCT-2003 to standardise OS field)
CC
XX
SO
     Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
 Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
            7 GRR 9
Qу
             -111
            5 GRR 7
Db
RESULT 59
AAR40875
     AAR40875 standard; protein; 11 AA.
ΙD
XX
AC
    AAR40875;
XX
     24-OCT-2003 (revised)
DТ
DT
     25-MAR-2003 (revised)
     28-MAR-1994
                 (first entry)
DT
XX
DE
     SSP for flavonoid-3',5'-hydroxylase gene.
XX
KW
     Flavonoid-3',5'-hydoxylase; transformation; plants; petunia; rose;
     tobacco; pigment alteration; blue; SSP; single specific primer; PCR;
KW
     polymerase chain reaction; amplification; expression; ss.
KW
XX
OS
     Petunia x hybrida.
XX
PN
    WO9318155-A1.
XX
PD
     16-SEP-1993.
XX
PF
    20-NOV-1992; 92WO-JP001520.
XX
PR
     02-MAR-1992; 92JP-00044963.
XX
     (KYOW ) KYOWA HAKKO KOGYO CO LTD.
PA
XX
PΙ
     Kikuchi Y, Kiyokawa S, Shimada Y, Ohbayashi M, Shimada R;
PΙ
     Okinaka Y;
XX
DR
    WPI; 1993-303469/38.
DR
    N-PSDB; AAQ47876.
XX
PT
     Gene coding for flavonoid-3',5'-hydroxylase of petunia petals - used to
PT
     transform plants e.g. petunia, rose or tobacco to give bluer flower
PT
     colour and altered pigment pattern.
XX
PS
     Claim 11; Page 57; 82pp; Japanese.
XX
     Insertion of the sequences (AAQ47840-42) into plants such as rose,
CC
CC
     petunia, tobacco and carnation, using a suitable vector such as
CC
     agrobacterium, give transformed plants which express the gene, resulting
     in petals with a bluer colour than normal, and/or pigmentation patterns
CC
```

```
CC
     which do not occur naturally. The sequences were amplified using primers
     (AAQ47843-70). Related single specific primers using a gene sequence
CC
     coding for the haem-binding region of cytochrome P450 are shown in
CC
     (AAQ47871-Q47903). (Updated on 25-MAR-2003 to correct PN field.) (Updated
CC
CC
     on 24-OCT-2003 to standardise OS field)
XX
     Sequence 11 AA;
SQ
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
  Matches
            3; Conservative 0; Mismatches
                                                                              0;
                                                   0; Indels
                                                                  0; Gaps
            7 GRR 9
Qу
              5 GRR 7
Db
RESULT 60
AAR31485
     AAR31485 standard; protein; 11 AA.
XX
     AAR31485;
AC
XX
     25-MAR-2003 (revised)
DT
DT
     26-MAY-1993 (first entry)
XX
DE
     P3 OF 31-34 subunit D band I internal fragment #4.
XX
     Subunit; D; A; C; B; P3 OF 31-34; osteogenic; active; protein; bone;
KW
     heterodimer; disulphide bond; formation; repair; defect; human; CNBr;
KW
KW
     SDS-PAGE.
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Misc-difference 1
FT
                     /note= "Undetermined amino acid"
FT
     Misc-difference 5
                     /note= "Undetermined amino acid"
FT
XX
     WO9300049-A1.
PN
XX
     07-JAN-1993.
PD
XX
                    91WO-US004686.
     01-JUL-1991;
PF
XX
PR
     20-JUN-1991;
                    91US-00718274.
XX
PΑ
     (XOMA ) XOMA CORP.
XX
     Grinna L, Theofan G, Parsons TF;
PI
XX
DR
     WPI; 1993-036101/04.
XX
     Osteogenically active protein preparations for repairing bone defects -
PT
     comprise hetero-dimer of P3 OF 31-34 sub-unit B and P3 OF 31-34 sub-unit
PT
PT
     D.
```

```
Disclosure; Page 27; 107pp; English.
PS
XX
     The sequences given in AAR31485-90 represent fragments of subunits D, B
CC
CC
     and A of P3 OF 31-34. These fragments were isolated from bands produced
     by SDS-PAGE analysis of P3 OF 31-34. Band I was found to contain
CC
     predominantly subunits B and D, and band II was found to contain
CC
     predominantly subunits A and C. These bands were subjected to N-terminal
CC
     sequencing and cleavage with CNBr to generate these fragments. P3 OF 31-
CC
     34 is an osteogenically active protein. A primary osteogenically active
CC
     peptide is formed of a heterodimer of P3 OF 31-34 subunits B and D which
CC
     are linked by at least one disulphide bond. The B/D heterodimer
CC
     stimulates osteogenesis and can be used to induce bone formation in
CC
     mammals, to repair bone defects. (Updated on 25-MAR-2003 to correct PN
CC
CC
     field.)
XX
     Sequence 11 AA;
SO
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
            3; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            1 ATN 3
QУ
              111
Db
            2 ATN 4
RESULT 61
AAR54747
     AAR54747 standard; protein; 11 AA.
TD
XX
AC
     AAR54747;
XX
DТ
     16-OCT-2003
                 (revised)
     25-MAR-2003
                 (revised)
DT
     05-DEC-1994
                  (first entry)
DT
XX
DE
     Ad5 fibre DNA fragment.
XX
     Single chain Fv fragment; ScFv; Gene Therapy; Adenovirus; Primer;
KW
KW
     Penton fibre; Ad5; Fusion sites; PCR; polymerase chain reaction.
XX
os
     unidentified adenovirus.
XX
                     Location/Qualifiers
FH
FT
     Peptide
                     1. .6
FT
                     /label= Ad5 fibre fragment
                     7. .11
FT
     Peptide
FT
                     /label= ScFv fragment
XX
     WO9410323-A1.
PN
XX
     11-MAY-1994.
PD
XX
PF
     04-NOV-1993;
                   93WO-GB002267.
XX
PR
     04-NOV-1992;
                    92GB-00023084.
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XX

```
XX
     (IMCR ) IMPERIAL CANCER RES TECHNOLOGY.
PΑ
XX
PΙ
     Spooner RA, Epenetos AA;
XX
     WPI; 1994-167477/20.
DR
     N-PSDB; AAQ64808.
DR
XX
     Virus with modified binding moiety specific for the target cells - used
РΤ
     to deliver genes for gene therapy and cancer treatment.
PΤ
XX
     Example 2; Page 62; 110pp; English.
PS
XX
     Amplification of Ad5 fibre DNA fragments was carried out by PCR using
CC
     oligonucleotide AAQ64807 (TAILbBACK) and AAQ64816, or any one of AAQ64808
CC
     -15. AAR54747 shows a fusion of the Ad5 fibre and ScFv fragment. The
CC
     invention is concerned with the fusion of an ScFv with the Ad5 fibre such
CC
     that the fusion sequence can be used to target cells for gene therapy.
CC
     (Updated on 25-MAR-2003 to correct PN field.) (Updated on 16-OCT-2003 to
CC
     standardise OS field)
CC
XX
     Sequence 11 AA;
SQ
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
           3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            4 KKT 6
Qy ·
              111
            3 KKT 5
Db
RESULT 62
AAR54725
ID
     AAR54725 standard; protein; 11 AA.
XX
AC
     AAR54725;
XX
DT
     27-AUG-2003 (revised)
     25-MAR-2003
DT
                  (revised)
DT
     02-DEC-1994 (first entry)
XX
DE
     ScFv-Ad5 fusion protein C.
XX
     Single chain Fv fragment; ScFv; Gene Therapy; Adenovirus; Penton fibre;
KW
KW
     Ad5; Fusion sites.
XX
OS
     Human adenovirus type 5.
XX
FΗ
     Kev
                     Location/Qualifiers
                     1. .6
FT
     Peptide
                     /label= Ad5 fibre
FT
                     7. .10
FT
     Peptide
FT
                     /label= ScFv fragment
FT
     Misc-difference 11
                     /label= X represents the remainder of the ScFv fragment.
FT
XX
```

```
WO9410323-A1.
PN
XX
    11-MAY-1994.
PD
XX
ΡF
     04-NOV-1993;
                    93WO-GB002267.
XX
     04-NOV-1992;
                    92GB-00023084.
PR
XX
     (IMCR ) IMPERIAL CANCER RES TECHNOLOGY.
PΑ
XX
     Spooner RA, Epenetos AA;
PΙ
XX
DR
    WPI; 1994-167477/20.
    N-PSDB; AAQ64764.
DR
XX
PT
     Virus with modified binding moiety specific for the target cells - used
     to deliver genes for gene therapy and cancer treatment.
PT
XX
PS
     Example 1; Page 46; 110pp; English.
XX
     Displaying functional antibody fragments on the surface of recombinant
CC
CC
     retroviral particles could be used to target replication deficient virus
     to target cells for gene delivery. The binding moiety (eg. a ScFv) is
CC
CC
     pref. external to the receptor for its host cell and fused to the virus
     direct or indirect by a spacer group. The binding site on the target cell
CC
     is a cell specific antigen. Fusion C (AAQ64764 fused to AAQ64761) is at
CC
     the end of the third repetitive unit of the shaft (co-ordinates 31323-4
CC
     (sequence co-ordinates taken from ADRCOMPGE 1) of the Ad5 fibre. The
CC
     sequence between the PstI and XhoI sites is unique to the ScFv used. The
CC
CC
     first 6 amino acid residues of the fusion A protein are from Ad5, the
     next 4 from the ScFv fragment used. X11 represents the remainder of the
CC
     ScFv used. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 27-
CC
CC
     AUG-2003 to correct OS field.)
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
 Matches
             3; Conservative
                              0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            4 KKT 6
              \perp
Db
            3 KKT 5
RESULT 63
AAR55163
ID
     AAR55163 standard; protein; 11 AA.
XX
AC
     AAR55163;
XX
DT
     25-MAR-2003 (revised)
DT
     11-JAN-1995
                 (first entry)
XX
DE
     Fragment of retinoic acid receptor RAR-beta.
XX
KW
     Liver; hap; retinoic acid receptor; steroid; thyroid; hormone; hepatoma;
```

```
KW
     retinoid; antibody.
XX
OS
    Homo sapiens.
XX
PN
    US5317090-A.
XX
     31-MAY-1994.
PD
XX
     11-DEC-1992;
                   92US-00989902.
PF
XX
     16-DEC-1987;
                  87US-00133687.
PR
                  87US-00134130.
PR
     17-DEC-1987;
     20-JUN-1988;
                   88US-00209009.
PR
     30-NOV-1988;
                   88US-00278136.
PR
     30-MAR-1989;
                   89US-00330405.
PR
                   91US-00751612.
PR
     21-AUG-1991;
PR
     30-MAR-1992;
                   92US-00860577.
XX
PΑ
     (INSP ) INST PASTEUR.
XX
    Marchio A, Chambon P, Petkovich M, Krust A, Dejean A, Tiollais P;
ΡI
PΙ
     Brand N, De The HB;
XX
    WPI; 1994-176333/21.
DR
XX
    Antibody specific for retinoic acid receptor-beta - useful for detecting,
PT
PT
     quantifying and identifying agonists and antagonists of retinoid
PΤ
     activity.
XX
     Claim 4; Col 40; 35pp; English.
PS
XX
CC
     The retinoic acid receptor RAR-beta is encoded by a gene designated hap.
CC
     The hap gene is transcribed at low level in most human tissues, but the
CC
     gene is overexpressed in prosate and kidney. Six out of seven hepatoma or
CC
     hepatoma-derived cell lines express a small hap transcript which is
CC
     undetectable in normal adult and foetal livers but present in all non-
     hepatic tissues tested. (Updated on 25-MAR-2003 to correct PF field.)
CC
XX
SQ
     Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
                         100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            3 NKK 5
Qу
             \perp
            4 NKK 6
RESULT 64
AAR67084
     AAR67084 standard; peptide; 11 AA.
ID
XX
AC
    AAR67084;
XX
DT
     25-MAR-2003 (revised)
DT
     29-JUN-1995 (first entry)
```

```
XX
     Sweet peptide (SW-MB1) contg. proline brackets.
DE
XX
KW
     Sweet peptide; non-nutrient sweetner; food; drink; dessert; candy;
KW
     interaction site; constrained conformation; reduce calorie intake;
KW
     sweet tasting papillae; diabetes; mimic; thaumatin; monellin; mabinlin.
XX
OS
     Synthetic.
XX
     WO9425482-A1.
ΡN
XX
PD
     10-NOV-1994.
XX
                    94WO-US004294.
PF
     21-APR-1994;
XX
PR
     23-APR-1993;
                    93US-00051741.
     29-OCT-1993;
                    93US-00143364.
PR
XX
PA
     (EVAN/) EVANS H J.
PΑ
     (KINI/) KINI R M.
XX
PΙ
     Evans HJ, Kini RM;
XX
DR
     WPI; 1994-358186/44.
XX
РΤ
     Peptide homologue or analogue with constrained conformation - has proline
PT
     residues flanking the interaction site to impart greater, or more stable,
PT
     biological activity.
XX
     Example 2; Page 32; 57pp; English.
PS
XX
CC
     AAR67077-88 are sweet peptides derived from naturally occuring
CC
     polypeptides that contain proline or proline/cysteine brackets. These
CC
     peptides are shortened to form fragments that contain one or more
CC
     interaction sites of interest. AAR67084-88 are deriv. from mabinlin. The
CC
     sweet peptides bind to receptors of sweet tasting papillae and induce a
CC
     sweet sensation. Typically, these peptides are 5000 to 10000 times
CC
     sweeter than sugar. In comparison, aspartame is only 160 times sweeter
CC
     than sugar. The peptides are useful as non-nutrient sweetners for food,
CC
     etc. and are helpful in normal and low calorie diets. They are esp.
     suitable for people with diabetes. The data collected demonstrates that
CC
CC
     interaction sites possess activity when present in a polypeptide that
     differs from the native form. Inclusion of conformation-constraining
CC
     moieties can have desirable effects on an interaction site. (Also see
CC
CC
     AAR67011-76 and AAR67089-152 for analogues of other biologically active
CC
     peptides contg. an interaction site flanked by conformation constraining
CC
     qps., eq. RGD peptides.) (Updated on 25-MAR-2003 to correct PN field.)
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
  Matches
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            8 RRP 10
              | | |
Db
            3 RRP 5
```

```
RESULT 65
AAR45679
     AAR45679 standard; protein; 11 AA.
XX
AC
     AAR45679;
XX
DT
     25-MAR-2003
                  (revised)
DТ
     25-JUL-1994
                  (first entry)
XX
     Fibronectin heparin binding fragment.
DE
XX
KW
     Cationic antibacterial protein; lipopolysaccharide binding;
     anticoagulant; granulocytes; RNIP; LPS; sepsis; autoimmune disorder;
KW
     septic shock; rabbit; CAP18.
KW
XX
OS
     Synthetic.
XX
PN
     WO9402589-A1.
XX
     03-FEB-1994.
PD
XX
PF
                    93WO-US006731.
     15-JUL-1993;
XX
PR
     17-JUL-1992;
                    92US-00916761.
PR
     17-JUL-1992;
                    92US-00916765.
XX
PA
     (PANO-) PANORAMA RES INC.
XX
PΙ
     Larrick JW, Wright SC, Hirata M;
XX
DR
     WPI; 1994-048847/06.
XX
PT
     Sequences encoding mammalian cationic antibacterial proteins - are
PT
     homologous to human and rabbit CAP18 sequences and have
     lipo:polysaccharide binding and anti-coagulation activity.
PT
XX
PS
     Disclosure; Page 50; 112pp; English.
XX
CC
     The sequence of CAP18 C-terminal RNIP was compared to that of a number of
CC
     heparin binding proteins to determine residues important for binding to
CC
     lipopolysaccharides and inhibiting LPS-mediated activation of macrophage,
CC
     as well as interfering with the clotting cascade to inhibit coagulation
     in conditions of disseminated intravascular coagulation. See also
CC
     AAR45667-81. (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
                                 0; Mismatches
  Matches
            3; Conservative
                                                                  0; Gaps
                                                                              0;
                                                    0; Indels
            9 RPR 11
Qу
              111
            7 RPR 9
Db
```

```
RESULT 66
AAR62627
    AAR62627 standard; peptide; 11 AA.
ID
XX
AC
    AAR62627;
XX
DT
     25-MAR-2003 (revised)
     11-MAY-1995 (first entry)
DT
XX
DE
     Epidermal growth factor-inhibitor fragment.
XX
KW
     Epidermal growth factor-inhibitor; therapeutic.
XX
     Oryctolagus cuniculus.
OS
XX
PN
     WO9422901-A1.
XX
PD
    13-OCT-1994.
XX
PF
     04-APR-1994;
                   94WO-US003675.
XX
     02-APR-1993; 93US-00041774.
PR
XX
     (UYJE-) UNIV JEFFERSON THOMAS.
PΑ
XX
ΡI
     Strayer DS;
XX
    WPI; 1994-333107/41.
DR
XX
     Epidermal growth factor inhibitor protein - capable inhibiting EGF-
РΤ
PT
     induced cellular proliferation.
XX
PS
     Claim 5; Page 33; 43pp; English.
XX
CC
     The fragment is linked to AAR62628 by at least one peptide bond, and
CC
     shows sequence homology with AAR62630, the human ras-like protein
CC
     isolated from teratocarcinoma cells. The resulting epidermal growth
     factor inhibitor is used in the treatment of disorders in animals
CC
CC
     (humans) caused by EGF-related rapid cell proliferation e.g. psoriasis,
     carcinoma, etc., and for the treatment of disorders of the mucous
CC
     membranes of the body e.g. leukoplakia. (Updated on 25-MAR-2003 to
CC
CC
     correct PN field.)
XX
SQ
     Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                             0;
 Matches
                                                                 0; Gaps
            4 KKT 6
Qу
              \perp
            8 KKT 10
Db
```

RESULT 67 AAR46491

```
AAR46491 standard; protein; 11 AA.
ΙD
XX
AC
    AAR46491;
XX
DT
    25-MAR-2003 (revised)
    09-JUL-1994 (first entry)
DT
XX
    Growth cone membrane p34-A.
DE
XX
    GAP-43; internal regulatory protein; IRP; neuron; neuronal growth;
KW
     growth cone membrane; p34; p38.
KW
XX
OS
    Rattus sp.
XX
PN
    AU9062068-A.
XX
    03-JAN-1991.
PD
XX
     31-AUG-1990;
                   90AU-00062068.
PF
XX
     22-DEC-1989; 89US-00465635.
PR
     02-JUL-1990;
                  90US-00546453.
PR
XX
PA
     (FISH/) FISHMAN M C.
     (FEDE ) FEDEROFF H J.
PA
     (ZUBE/) ZUBER M X.
PA
     (STRI/) STRITTMATTER S M.
PA
     (VALE/) VALENZUELA D.
PA
XX
     Fishman MC, Federoff HJ, Zuber MX, Strittmatter SM, Valenzuela D;
PT
XX
    WPI; 1994-049230/07.
DR
XX
PT
     Recombinant mammalian GAP-43 protein - used to monitor and regulate
PT
     neuronal growth in animals, pref. humans.
XX
PS
     Disclosure; Fig 16; 156pp; English.
XX
CC
     Proteins p34 and p38 were detected in rat growth cone membrane
     preparations and identified as the alpha and beta subunits, respectively,
CC
     of the GTP-binding protein, Go. Partial protein sequences were
CC
     determined: p38-A (AAR46488), p38-B (AAR46489), p38-C (AAR46490), p34-A
CC
     (AAR46491) and p34-B (AAR46492 or AAR46493). (Updated on 25-MAR-2003 to
CC
     correct PA field.)
CC
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
 Best Local Similarity 100.0%; Pred. No. 1.4e+04;
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps 0;
            2 TNK 4
Qу
             9 TNK 11
```

```
AAR71762
     AAR71762 standard; peptide; 11 AA.
TD
XX
     AAR71762;
AC
XX
DT
     25-MAR-2003
                  (revised)
DT
     15-MAY-1995
                 (first entry)
XX
DE
     Neurotensin receptor fluorescent probe.
XX
     Neurotensin; NT; receptor; probe; fluorescent.
KW
XX
OS
     Synthetic.
XX
                     Location/Qualifiers
FH
     Key
FT
     Modified-site
                     /note= "Tyr or D-Tyr; and this residue is N-acylated with
FT
                     fluorescent label. See CC below. Also this amino acid can
FT
                     be substituted by Lys or Orn."
FT
XX
     EP606804-A2.
PN
XX
     20-JUL-1994.
PD
XX
PF
     27-DEC-1993;
                    93EP-00403185.
XX
                    92CA-02086453.
PR
     30-DEC-1992;
XX
     (UYMC-) UNIV MCGILL.
PA
XX
PI
     Beaudet A, Faure M,
                           Gaudreau P;
XX
DR
     WPI; 1994-226757/28.
XX
РΤ
     New forescent markers for neurotensin receptors - useful for in vitro
PT
     labelling of neurotensin receptors on cell surface and to isolate
PT
     neurotensin-receptor expressing cells.
XX
PS
     Claim 2; Page 5; 19pp; English.
XX
CC
     The invention concerns highly sensitive fluorescent probes which allow
CC
     for rapid and precise characterisation of neurotensin receptor binding
     properties on whole cells. The probes are of formula R1-C(=X)-R in which
CC
     R1 is a fluorophore chosen from fluorescein, rhodamine, Blue
CC
     fluorescent and Texas red; X is oxygen or sulphur; and R is a neurotensin
CC
CC
     -type polypeptide sequence containing the core sequence Arg-Arg-Pro-Tyr-
     Ile-Leu or Arg-Arg-Pro-Trp-Ile-Leu. Specific sequences are given in
CC
     AAR71745 - AAR71772. The R1-CX- acyl group is linked to the peptide via
CC
     the N-terminus in position 1. The N-terminal amino acid may also be
CC
     substd. by Lys or Orn. The present sequence represents one of the claimed
CC
     peptide sequences for R. (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
SO
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
  Matches
             3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
```

```
8 RRP 10
Qy
              \perp \perp \perp
            6 RRP 8
Db
RESULT 69
AAR71761
     AAR71761 standard; peptide; 11 AA.
XX
AC
     AAR71761;
XX
DT
     25-MAR-2003
                  (revised)
     15-MAY-1995
DT
                  (first entry)
XX
     Neurotensin receptor fluorescent probe.
DE
XX
KW
     Neurotensin; NT; receptor; probe; fluorescent.
XX
os
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Modified-site
FT
                     /note= "Tyr or D-Tyr; and this residue is N-acylated with
FT
                     fluorescent label. See CC below. Also this amino acid can
FT
                     be substituted by Lys or Orn."
XX
PN
     EP606804-A2.
XX
PD
     20-JUL-1994.
XX
PF
     27-DEC-1993;
                    93EP-00403185.
XX
PR
     30-DEC-1992;
                    92CA-02086453.
XX
     (UYMC-) UNIV MCGILL.
PA
XX
PI
     Beaudet A, Faure M, Gaudreau P;
XX
DR
     WPI; 1994-226757/28.
XX
PΤ
     New forescent markers for neurotensin receptors - useful for in vitro
PT
     labelling of neurotensin receptors on cell surface and to isolate
     neurotensin-receptor expressing cells.
PT
XX
PS
     Claim 2; Page 5; 19pp; English.
XX
     The invention concerns highly sensitive fluorescent probes which allow
CC
CC
     for rapid and precise characterisation of neurotensin receptor binding
     properties on whole cells. The probes are of formula R1-C(=X)-R in which
CC
     R1 is is a fluorophore chosen from fluorescein, rhodamine, Blue
CC
CC
     fluorescent and Texas red; X is oxygen or sulphur; and R is a neurotensin
CC
     -type polypeptide sequence containing the core sequence Arg-Arg-Pro-Tyr-
     Ile-Leu or Arg-Arg-Pro-Trp-Ile-Leu. Specific sequences are given in
CC
CC
     AAR71745 - AAR71772. The R1-CX- acyl group is linked to the peptide via
     the N-terminus in position 1. The N-terminal amino acid may also be
CC
```

substd. by Lys or Orn. The present sequence represents one of the claimed

CC

```
peptide sequences for R. (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
     Sequence 11 AA;
SQ
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+04;
                                                   0; Indels
                                                                              0;
  Matches
            3; Conservative 0; Mismatches
                                                                  0; Gaps
            8 RRP 10
QУ
              6 RRP 8
Db
RESULT 70
AAR71764
     AAR71764 standard; peptide; 11 AA.
XX
AC
     AAR71764;
XX
DT
     25-MAR-2003
                 (revised)
DT
     15-MAY-1995 (first entry)
XX
     Neurotensin receptor fluorescent probe.
DΕ
XX
KW
     Neurotensin; NT; receptor; probe; fluorescent.
XX
OS
     Synthetic.
XX
                     Location/Qualifiers
FH
     Key
     Modified-site
FT
FT
                     /note= "Tyr or D-Tyr; and this residue is N-acylated with
                     fluorescent label. See CC below. Also this amino acid can
FT
FT
                     be substituted by Lys or Orn."
FT
     Modified-site
FT
                     /label= Orn
XX
PN
     EP606804-A2.
XX
     20-JUL-1994.
PD
XX
                   93EP-00403185.
PF
     27-DEC-1993;
XX
     30-DEC-1992;
                    92CA-02086453.
PR
XX
PΑ
     (UYMC-) UNIV MCGILL.
XX
PΙ
     Beaudet A, Faure M, Gaudreau P;
XX
DR
     WPI; 1994-226757/28.
XX
PT
     New forescent markers for neurotensin receptors - useful for in vitro
     labelling of neurotensin receptors on cell surface and to isolate
PT
PT
     neurotensin-receptor expressing cells.
XX
PS
     Claim 2; Page 5; 19pp; English.
XX
CC
     The invention concerns highly sensitive fluorescent probes which allow
```

```
properties on whole cells. The probes are of formula R1-C(=X)-R in which
CC
     R1 is is a fluorophore chosen from fluorescein, rhodamine, Blue
CC
     fluorescent and Texas red; X is oxygen or sulphur; and R is a neurotensin
CC
CC
     -type polypeptide sequence containing the core sequence Arg-Arg-Pro-Tyr-
CC
     Ile-Leu or Arg-Arg-Pro-Trp-Ile-Leu. Specific sequences are given in
     AAR71745 - AAR71772. The R1-CX- acyl group is linked to the peptide via
CC
     the N-terminus in position 1. The N-terminal amino acid may also be
CC
     substd. by Lys or Orn. The present sequence represents one of the claimed
CC
     peptide sequences for R. (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
            3; Conservative
                                0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            8 RRP 10
Qγ
              +111
Db
            6 RRP 8
RESULT 71
AAR71763
     AAR71763 standard; peptide; 11 AA.
ID
XX
AC
    AAR71763;
XX
     25-MAR-2003 (revised)
DT
DT
     15-MAY-1995 (first entry)
XX
     Neurotensin receptor fluorescent probe.
DE
XX
KW
     Neurotensin; NT; receptor; probe; fluorescent.
XX
os
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Modified-site
FT
                     /note= "Tyr or D-Tyr; and this residue is N-acylated with
                     fluorescent label. See CC below. Also this amino acid can
FT
FT
                     be substituted by Lys or Orn."
FT
     Modified-site
FT
                     /label= Orn
XX
PN
     EP606804-A2.
XX
     20-JUL-1994.
PD
XX
PF
     27-DEC-1993;
                    93EP-00403185.
XX
PR
     30-DEC-1992;
                    92CA-02086453.
XX
PA
     (UYMC-) UNIV MCGILL.
XX
PΙ
     Beaudet A, Faure M, Gaudreau P;
XX
```

for rapid and precise characterisation of neurotensin receptor binding

CC

```
WPI; 1994-226757/28.
DR
XX
     New forescent markers for neurotensin receptors - useful for in vitro
РΤ
     labelling of neurotensin receptors on cell surface and to isolate
PT
     neurotensin-receptor expressing cells.
PΤ
XX
     Claim 2; Page 5; 19pp; English.
РS
XX
CC
     The invention concerns highly sensitive fluorescent probes which allow
     for rapid and precise characterisation of neurotensin receptor binding
CC
     properties on whole cells. The probes are of formula R1-C(=X)-R in which
CC
     R1 is is a fluorophore chosen from fluorescein, rhodamine, Blue
CC
     fluorescent and Texas red; X is oxygen or sulphur; and R is a neurotensin
CC
     -type polypeptide sequence containing the core sequence Arg-Arg-Pro-Tyr-
CC
     Ile-Leu or Arg-Arg-Pro-Trp-Ile-Leu. Specific sequences are given in
CC
     AAR71745 - AAR71772. The R1-CX- acyl group is linked to the peptide via
CC
     the N-terminus in position 1. The N-terminal amino acid may also be
CC
CC
     substd. by Lys or Orn. The present sequence represents one of the claimed
     peptide sequences for R. (Updated on 25-MAR-2003 to correct PN field.)
CC
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
            8 RRP 10
Qу
              111
            6 RRP 8
Db
RESULT 72
AAR54763
ID
     AAR54763 standard; peptide; 11 AA.
XX
AC
     AAR54763; .
XX
     25-MAR-2003 (revised)
DT
     02-DEC-1994 (first entry)
DТ
XX
DΕ
     Plasminogen analog with basic amino acid in cleavage site.
XX
KW
     Plasminogen; blood-clotting; cleavage site; thrombin; protease; enzyme;
KW
     thrombosis; infarction; coagulation; cancer.
XX
OS
     Homo sapiens.
XX
     WO9410318-A1.
PN
XX
     11-MAY-1994.
PD
XX
                    93WO-GB002219.
PF
     28-OCT-1993;
XX
                    92GB-00022758.
PR
     29-OCT-1992;
XX
     (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PΑ
XX
```

```
XX
     WPI: 1994-167473/20.
DR
XX
     New thrombin activatable plasminogen analogues - having a basic amino
PT
     acid residue in the cleavage site to provide more rapid cleavage and
PT
PT
     improved activity.
XX
PS
     Claim 13; Page 26; 38pp; English.
XX
CC
     This peptide sequence corresponds to a cleavage site present in a
     plasminogen analog which enables the protein to be cleaved more rapidly
CC
     by thrombin. The plasminogen analogs are used for prophylaxis and/or
CC
     treatment of conditions caused by an imbalance between clotting and
CC
CC
     fibrinolysis. They can be used to treat e.g. infarction, thrombosis and
CC
     coagulation imbalances associated with cancer. The analogs can be
CC
     prepared by chemical synthesis or preferably by recombinant DNA
CC
     techniques. The analogs are prepared by mutagenesis of cDNA and
CC
     expression in CHO cell cultures. (Updated on 25-MAR-2003 to correct PN
CC
     field.)
XX
SQ
     Sequence 11 AA;
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 1.4e+04;
  Best Local Similarity
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            9 RPR 11
Qу
              \Box
            7 RPR 9
Db
RESULT 73
AAR46502
     AAR46502 standard; protein; 11 AA.
XX
AC.
     AAR46502;
XX
DT
     09-JUL-1994 (first entry)
XX
DE
     Growth cone membrane p34-A.
XX
     GAP-43; internal regulatory protein; IRP; neuron; neuronal growth;
KW
     growth cone membrane; p34; p38.
KW
XX
OS
     Rattus sp.
XX
PN
     AU9347435-A.
XX
     23-DEC-1993.
PD
XX
PF
     17-SEP-1993;
                   93AU-00047435.
XX
                    89US-00465635.
PR
     22-DEC-1989;
PR
     02-JUL-1990;
                    90US-00546453.
XX
     (FISH/) FISHMAN M C.
PA
```

Gilbert RJ, Hunter MG, Dawson KM;

PΙ

```
(FEDE/) FEDEROFF H J.
PΑ
     (ZUBE/) ZUBER M X.
PA
     (STRI/) STRITTMATTER S M.
PA
     (VALE/) VALENZUELA D.
PA
XX
PΙ
     Fishman MC, Federoff HJ, Zuber MX, Strittmatter SM, Valenzuela D;
XX
    WPI; 1994-049278/07.
DR
XX
PT
     Recombinant mammalian GAP-43 protein - used to monitor and regulate
PT
     neuronal growth in animals, pref. humans.
XX
     Disclosure; Fig 16; 156pp; English.
PS
XX
CC
     Proteins p34 and p38 were detected in rat growth cone membrane
CC
     preparations and identified as the alpha and beta subunits, respectively,
CC
     of the GTP-binding protein, Go. Partial protein sequences were
CC
     determined: p38-A (AAR46499), p38-B (AAR46500), p38-C (AAR46501), p34-A
CC
     (AAR46502) and p34-B (AAR46503 or AAR46504)
XX
SQ
     Sequence 11 AA;
 Query Match
                          27.3%; Score 3; DB 2; Length 11;
 Best Local Similarity
                         100.0%; Pred. No. 1.4e+04;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
Qу
           2 TNK 4
             +111
Db
           9 TNK 11
RESULT 74
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ID
    AAR70293 standard; peptide; 11 AA.
XX
AC
    AAR70293;
XX
DT
    14-NOV-1995 (first entry)
XX
DΕ
     Subpeptide 7N1 of thrombospondin 1 (TS1) binding peptide C7.
XX
KW
     Thrombospondin 1; TS1; receptor; cell-adhesion.
XX
OS
     Synthetic.
XX
PN
    US5399667-A.
XX
PD
     21-MAR-1995.
XX
     05-MAR-1993;
                  93US-00029333.
ΡF
XX
PR
     05-MAR-1993;
                  93US-00029333.
XX
PΑ
     (UNIW ) UNIV WASHINGTON.
XX
PΙ
     Kosfeld MD, Frazier WA;
XX
```

```
DR
     WPI; 1995-130736/17.
XX
PT
     Thrombospondin receptor binding peptide(s) - comprise tri:peptide
PΤ
     sequence Val-Val-Met (VVM).
XX
PS
     Disclosure; Fig 1A; 25pp; English.
XX
CC
     AAR70292-300 are synthetic subpeptides which were derived from peptide C7
CC
     of the cell binding domain (CBD) of the thrombospondin 1 (TS1) receptor.
CC
     These peptides were synthesised and used in a cell adhesion assay.
CC
     Subpeptides 7N1, 7N2, 7N2-1,7N2-2,7N3 and 7N3-2 were used to further
CC
     locate the active sequence(s). The binding activity of this subpeptide in
CC
     relation to peptides C7, 7C, 7N and the 7N subpeptide derivatives 7N2,
CC
     7N2-1, 7N2-2, 7N3, and 7N3-2 is as follows: 7N>7N3>7N2>7N2-2>7N3-
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     2>7C,7N1,7N2-1 (AAR70291>292>297>294>296>299>300,293,295)
XX
SQ
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  Query Match
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  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
  Matches
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Qу
              111
Db
            9 KTG 11
RESULT 75
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AC
     AAR70594;
XX
DΤ
     14-FEB-1996 (first entry)
XX
DE
     HIV(B35)-19, human immunodeficiency virus epitope.
XX
KW
     HLA; human lymphocyte antigen; HIV; human immunodeficiency virus;
KW
     binding peptide; induce killer cell; prevention; treatment; AIDS;
KW
     autoimmune disease syndrome; vaccine.
XX
OS
     Human immunodeficiency virus.
XX
PN
     WO9511255-A1.
XX
PD
     27-APR-1995.
XX
     19-OCT-1994;
PF
                    94WO-JP001756.
XX
     19-OCT-1993;
                    93JP-00261302.
PR
XX
PA
     (AJIN ) AJINOMOTO KK.
XX
PΙ
     Takiquchi M, Miwa K;
XX
DR
     WPI; 1995-170188/22.
XX
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```
PT
     HLA-binding peptide fragments from HIV proteins - induce killer cells
     which target HIV-infected cells and can be incorporated into anti-HIV
PT
PT
     vaccines.
XX
PS
     Example 1; Page 10; 61pp; Japanese.
XX
     AAR70594 is a peptide fragment derived from an HIV (Human
CC
CC
     Immunodeficiency Virus) pol protein (residues 587-596) and is capable of
CC
     binding to a human lymphocyte antigen. The peptide can induce killer
     cells which target HIV-infected cells. It is also useful in the
CC
CC
     prevention and treatment of HIV and AIDS. Anti-HIV vaccines may
     incorporate the peptides, or may incorporate a vector (such as vaccinia
CC
CC
     or BCG) contg. DNA encoding the peptides
XX
SQ
     Sequence 11 AA;
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.4e+04;
 Matches
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Qу
              +111
Db
            7 KTG 9
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Search completed: April 8, 2004, 15:39:55 Job time : 46.3077 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

April 8, 2004, 15:30:08; Search time 11.3077 Seconds Run on:

(without alignments)

50.221 Million cell updates/sec

US-09-787-443A-9 Title:

Perfect score: 11

Sequence: 1 ATNKKTGRRPR 11

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 389414 seqs, 51625971 residues

Word size :

Total number of hits satisfying chosen parameters: 8542

Minimum DB seq length: 11 Maximum DB seq length: 11

Post-processing: Listing first 100 summaries

Database : Issued Patents AA:\*

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3: /cgn2 6/ptodata/2/iaa/6A COMB.pep:\*

4: /cgn2\_6/ptodata/2/iaa/6B\_COMB.pep:\*
5: /cgn2\_6/ptodata/2/iaa/PCTUS\_COMB.pep:\*

6: /cgn2\_6/ptodata/2/iaa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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2	4	36.4	11	3	US-09-208-966-55	Sequence 55, Appl
3	4	36.4	11	3	US-09-208-966-57	Sequence 57, Appl
4	4	36.4	11	3	US-09-044-411-7	Sequence 7, Appli
5	4	36.4	11	3	US-09-133-062D-29	Sequence 29, Appl
6	4	36.4	11	4	US-09-802-109A-7	Sequence 7, Appli
7	4	36.4	11	4	US-09-630-250B-16	Sequence 16, Appl
8	4	36.4	11	4	US-09-775-052A-55	Sequence 55, Appl
9	4	36.4	11	4	US-09-775-052A-57	Sequence 57, Appl
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11	3	27.3	11	1	US-07-666-719-18	Sequence 18, Appl

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13	3	27.3	11	1	US-07-755-161A-9	Sequence 9, Appli
14	3	27.3	11	1	US-07-891-174-9	Sequence 9, Appli
15	3	27.3	11	1	US-07-912-900-2	Sequence 2, Appli
16	3	27.3	11	1	US-07-912-900-13	Sequence 13, Appl
17	3	27.3	11	1	US-07-912-900-15	Sequence 15, Appl
18	3	27.3	11	1	US-08-029-333-21	Sequence 21, Appl
19	3	27.3	11	1	US-08-149-106-23	Sequence 23, Appl
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20				_	US-07-841-997A-34	Sequence 34, Appl
21	3	27.3	11	1	US-08-037-486-6	Sequence 6, Appli
22	3	27.3	11	1	US-08-336-087-4	Sequence 4, Appli
23	3	27.3	11	1	US-08-298-021-23	Sequence 23, Appl
24	3	27.3	11	1	US-07-609-716-15	Sequence 15, Appl
25	3	27.3	11	1	US-08-178-570-75	Sequence 75, Appl
26	3	27.3	11	1	US-08-041-774-2	Sequence 2, Appli
27	3	27.3	11	1	US-08-217-188A-35	Sequence 35, Appl
28	3	27.3	11	1	US-08-217-188A-60	Sequence 60, Appl
29	3	27.3	11	1	US-08-170-095B-6	Sequence 6, Appli
30	3	27.3	11	1	US-08-285-309-2	Sequence 2, Appli
31	3	27.3	11	1	US-08-285-309-13	Sequence 13, Appl
32	3	27.3	11	1	US-08-285-309-15	
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33		27.3		1	US-08-313-681A-25	Sequence 25, Appl
34	3	27.3	11	1	US-08-378-761A-68	Sequence 68, Appl
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37	3	27.3	11	1	US-08-313-075A-14	Sequence 14, Appl
38	3	27.3	11	1	US-08-485-286-68	Sequence 68, Appl
39	3	27.3	11	1	US-08-485-286-70	Sequence 70, Appl
40	3	27.3	11	1	US-08-344-636-15	Sequence 15, Appl
41	3	27.3	11	1	US-08-344-636-18	Sequence 18, Appl
42	3	27.3	11	1	US-08-256-771-32	Sequence 32, Appl
43	3	27.3	11	1	US-08-396-866-6	Sequence 6, Appli
44	3	27.3	11	1	US-08-336-343A-24	Sequence 24, Appl
45	3	27.3	11	1	US-08-469-582-7	Sequence 7, Appli
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62	3	27.3	11	2	US-08-508-664-13	Sequence 13, Appl
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71	3		27.3	1		2	US-08-934-222-77		-	77, Appl
72	3		27.3	1		2	US-08-395-204-4		-	4, Appli
73	3		27.3	1		2	US-08-933-402-77			77, Appl
74	3		27.3	1		2	US-09-207-621-77			77, Appl
75	3		27.3	1	_	2	US-08-645-193B-55		-	55, Appl
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79	3		27.3	1	_	2	US-09-090-567-4		-	4, Appli
80	3		27.3	1		3	US-08-873-970-7		_	7, Appli
81	3		27.3	1	_	3	US-08-369-643-75		-	75, Appl
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83	3		27.3	1		3	US-08-482-085B-36		_	36, Appl
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85	3		27.3	$\tilde{1}$		3	US-08-802-981-147		-	147, App
86	3		27.3	1		3	US-09-130-225-19		-	19, Appl
87	3	;	27.3	1		3	US-08-667-725B-35		_	35, Appl
88	3	;	27.3	1	1	3	US-08-667-725B-60			60, Appl
89	3	;	27.3	1	1	3	US-09-231-797-77			77, Appl
90	3		27.3	1	1	3	US-08-934-224-77		-	77, Appl
91	3		27.3	1	1	3	US-09-322-911-25		-	25, Appl
92	3		27.3	1	1	3	US-08-933-843-77			77, Appl
93	3		27.3	1	1	3	US-08-475-411A-15		-	15, Appl
94	3	}	27.3	1	1	3	US-09-007-748-35			35, Appl
95	3	;	27.3	1	1	3	US-09-007-748-60		_	60, Appl
96	3	}	27.3	1	1	3	US-08-934-223-77	S	equence	77, Appl
97	3	;	27.3	1	1	3	US-09-095-855-7	S	equence	7, Appli
98	3	3	27.3	1	1	3	US-09-273-565-54		_	54, Appl
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100	3	}	27.3	1	1	3	US-08-836-075A-110	S	equence	110, App

## ALIGNMENTS

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RESULT 1
US-09-630-250B-15
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- ; Sequence 15, Application US/09630250B
- ; Patent No. 6624129
- ; GENERAL INFORMATION:
- ; APPLICANT: Borch, Kim
- ; APPLICANT: Vind, Jesper
- ; APPLICANT: Svendsen, Allan
- ; APPLICANT: Hlakier, Dorte
- ; APPLICANT: Patkar, Shamkant
- ; APPLICANT: Bojsen, Kirsten
- ; TITLE OF INVENTION: Lipase Variant
- FILE REFERENCE: 5469.204-US
- ; CURRENT APPLICATION NUMBER: US/09/630,250B
- ; CURRENT FILING DATE: 2000-08-01
- ; NUMBER OF SEQ ID NOS: 19
- ; SOFTWARE: PatentIn version 3.2
- ; SEQ ID NO 15
- ; LENGTH: 11
- ; TYPE: PRT

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ORGANISM: Artificial Sequence
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  OTHER INFORMATION: Synthetic
US-09-630-250B-15
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 Matches
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             Db
           5 GRRPR 9
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US-09-208-966-55
; Sequence 55, Application US/09208966
; Patent No. 6221355
; GENERAL INFORMATION:
; APPLICANT: Dowdy, Steven F.
 TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
; FILE REFERENCE: 48881/1742
; CURRENT APPLICATION NUMBER: US/09/208,966
; CURRENT FILING DATE: 1998-12-10
 EARLIER APPLICATION NUMBER: 60/082,402
  EARLIER FILING DATE: 1998-04-20
; EARLIER APPLICATION NUMBER: 60/069,012
; EARLIER FILING DATE: 1997-12-10
; NUMBER OF SEQ ID NOS: 57
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US-09-208-966-55
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           4; Conservative 0; Mismatches 0; Indels
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Qу
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Db
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; Sequence 57, Application US/09208966
; Patent No. 6221355
; GENERAL INFORMATION:
 APPLICANT: Dowdy, Steven F.
  TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
; FILE REFERENCE: 48881/1742
; CURRENT APPLICATION NUMBER: US/09/208,966
; CURRENT FILING DATE: 1998-12-10
; EARLIER APPLICATION NUMBER: 60/082,402
; EARLIER FILING DATE: 1998-04-20
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; EARLIER FILING DATE: 1997-12-10
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   ORGANISM: human
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US-09-044-411-7
; Sequence 7, Application US/09044411A
; Patent No. 6258774
; GENERAL INFORMATION:
 APPLICANT: Stein, Stanley
  TITLE OF INVENTION: CARRIER FOR IN VIVO DELIVERY OF A THERAPEUTIC
; FILE REFERENCE: 601-1-083
  CURRENT APPLICATION NUMBER: US/09/044,411A
  CURRENT FILING DATE: 1998-03-19
  NUMBER OF SEQ ID NOS: 10
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; SEQ ID NO 7
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Human immunodeficiency virus type 1
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; Patent No. 6258774
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   FEATURE:
  NAME/KEY: BINDING
   LOCATION: (10)
   OTHER INFORMATION: Cys (biotin)
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   OTHER INFORMATION: Peptide has an N-terminal acetyl group.
    FEATURE:
   OTHER INFORMATION: Peptide has a C-terminal amide group.
US-09-044-411-7
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  Best Local Similarity 100.0%; Pred. No. 2.8e+02;
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  Matches
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Qy
             Db
           4 RRPR 7
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RESULT 5
US-09-133-062D-29
; Sequence 29, Application US/09133062D
; Patent No. 6258776
; GENERAL INFORMATION:
  APPLICANT: Hemmings, Brian A
  APPLICANT: Millward, Thomas A
 TITLE OF INVENTION: Calcium Regulated Kinase
  FILE REFERENCE: 30110
  CURRENT APPLICATION NUMBER: US/09/133,062D
  CURRENT FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: GB 9717089.8
 PRIOR FILING DATE: 1997-08-12
  PRIOR APPLICATION NUMBER: GB 9717499.9
  PRIOR FILING DATE: 1998-08-19
; NUMBER OF SEQ ID NOS: 34
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; SEO ID NO 29
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   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: synthetic peptide
   OTHER INFORMATION: internal peptide
US-09-133-062D-29
                         36.4%; Score 4; DB 3; Length 11;
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          4; Conservative 0; Mismatches 0; Indels
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Qу
             \Box
Db
           4 KKTG 7
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US-09-802-109A-7
; Sequence 7, Application US/09802109A
; Patent No. 6617306
; GENERAL INFORMATION:
; APPLICANT: Stein, Stanley
  TITLE OF INVENTION: CARRIER FOR IN VIVO DELIVERY OF A THERAPEUTIC
; FILE REFERENCE: 601-1-083
  CURRENT APPLICATION NUMBER: US/09/802,109A
  CURRENT FILING DATE: 2001-03-08
 PRIOR APPLICATION NUMBER: US/09/044,411
  PRIOR FILING DATE: 1998-03-19
  NUMBER OF SEQ ID NOS: 10
  SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 7
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Human immunodeficiency virus type 1
   FEATURE:
   OTHER INFORMATION: Same as Sequence ID 2, but with a substitution of
; Patent No. 6617306
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FEATURE:
;
   NAME/KEY: BINDING
   LOCATION: (10)
   OTHER INFORMATION: Cys(biotin)
   OTHER INFORMATION: Peptide has an N-terminal acetyl group.
   FEATURE:
   OTHER INFORMATION: Peptide has a C-terminal amide group.
US-09-802-109A-7
                         36.4%; Score 4; DB 4; Length 11;
 Query Match
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                              0; Mismatches
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           8 RRPR 11
Qу
             \Box
           4 RRPR 7
RESULT 7
US-09-630-250B-16
; Sequence 16, Application US/09630250B
; Patent No. 6624129
; GENERAL INFORMATION:
; APPLICANT: Borch, Kim
; APPLICANT: Vind, Jesper
; APPLICANT: Svendsen, Allan
; APPLICANT: Hlakier, Dorte
; APPLICANT: Patkar, Shamkant
; APPLICANT: Bojsen, Kirsten
  TITLE OF INVENTION: Lipase Variant
  FILE REFERENCE: 5469.204-US
  CURRENT APPLICATION NUMBER: US/09/630,250B
  CURRENT FILING DATE: 2000-08-01
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: PatentIn version 3.2
; SEQ ID NO 16
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Synthetic
US-09-630-250B-16
                         36.4%; Score 4; DB 4; Length 11;
  Query Match
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Qу
              8 GRRP 11
RESULT 8
US-09-775-052A-55
; Sequence 55, Application US/09775052A
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OTHER INFORMATION: Gln to Pro.

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; Patent No. 6645501
; GENERAL INFORMATION:
  APPLICANT: Dowdy, Steven F.
  TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
  FILE REFERENCE: 48881/1742
  CURRENT APPLICATION NUMBER: US/09/775,052A
  CURRENT FILING DATE: 2001-12-05
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/208,966
  PRIOR FILING DATE: EARLIER FILING DATE: 1998-12-10
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/069,012
  PRIOR FILING DATE: EARLIER FILING DATE: 1997-12-10
  NUMBER OF SEQ ID NOS: 57
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 55
   LENGTH: 11
   TYPE: PRT
   ORGANISM: human
US-09-775-052A-55
                         36.4%; Score 4; DB 4; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.8e+02;
                                                                            0;
           4; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
 Matches
           8 RRPR 11
Qy
             1111
Db
           6 RRPR 9
RESULT 9
US-09-775-052A-57
; Sequence 57, Application US/09775052A
; Patent No. 6645501
; GENERAL INFORMATION:
; APPLICANT: Dowdy, Steven F.
  TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
  FILE REFERENCE: 48881/1742
  CURRENT APPLICATION NUMBER: US/09/775,052A
  CURRENT FILING DATE: 2001-12-05
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/208,966
  PRIOR FILING DATE: EARLIER FILING DATE: 1998-12-10
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/069,012
  PRIOR FILING DATE: EARLIER FILING DATE: 1997-12-10
  NUMBER OF SEQ ID NOS: 57
   SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 57
    LENGTH: 11
    TYPE: PRT
    ORGANISM: human
US-09-775-052A-57
                         36.4%; Score 4; DB 4; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 2.8e+02;
  Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps
            8 RRPR 11
Qу
              Db
            6 RRPR 9
```

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RESULT 10
5223254-12
;Patent No. 5223254
    APPLICANT: PARADISO, PETER R.; HILDRETH, STEPHEN W.; HU,
;BRANDA T.;MARTIN-GALLARDO, ANTONIA;ARUMUGHAM, RASAPPA
    TITLE OF INVENTION: RESPIRATOTY SYNCYTIAL VIRUS VACCINES
    NUMBER OF SEQUENCES: 17
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/247,017
      FILING DATE: 20-SEP-1988
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 102,180
      FILING DATE: 29-SEP-1987
; SEQ ID NO:12:
      LENGTH: 11
5223254-12
                         36.4%; Score 4; DB 6; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.8e+02;
                                                                             0;
            4; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
           6 TGRR 9
QУ
              1111
           4 TGRR 7
RESULT 11
US-07-666-719-18
; Sequence 18, Application US/07666719
; Patent No. 5247067
  GENERAL INFORMATION:
    APPLICANT: ARIMA, Terukatsu
               YAMADA, Kyoko
    APPLICANT:
    APPLICANT: HATANAKA, Tadashi
    APPLICANT: NAMBA, Toshihiko
    APPLICANT: TSUJI, Masao
    TITLE OF INVENTION: PEPTIDE AND ITS USE
    NUMBER OF SEQUENCES:
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
       STREET: 1755 Jefferson Davis Highway, Fourth Floor
      CITY: Arlington
       STATE: Virginia
      COUNTRY: US
       ZIP: 22202
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/666,719
       FILING DATE: 19910422
       CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
```

```
NAME: Oblon, No. 5247067man F.
;
      REGISTRATION NUMBER: 24,618
      REFERENCE/DOCKET NUMBER: 363-264-0X
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (703)521-5940
      TELEFAX: (703)486-2347
      TELEX: 248855 OPAT UR
  INFORMATION FOR SEQ ID NO:
                              18:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-666-719-18
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
           3 NKK 5
QУ
             111
           7 NKK 9
Db
RESULT 12
US-07-718-274A-23
; Sequence 23, Application US/07718274A
; Patent No. 5284756
  GENERAL INFORMATION:
     APPLICANT: Grinna, Lynn
    APPLICANT: Parsons, Thomas F.
     APPLICANT: Theofan, Georgia
     TITLE OF INVENTION: Osteogenic Factor
    NUMBER OF SEQUENCES: 63
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
      ADDRESSEE: Bicknell
      STREET: Two First National Plaza, 20 South Clark
      STREET: Street
      CITY: Chicago
       STATE: Illinois
       COUNTRY: USA
      ZIP: 60603
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/07/718,274A
       FILING DATE: 19910620
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/415,555
       FILING DATE: 04-OCT-1989
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/256,034
```

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FILING DATE: 11-OCT-1988
     ATTORNEY/AGENT INFORMATION:
      NAME: Sharp, Jeffrey S.
       REGISTRATION NUMBER: 31,879
       REFERENCE/DOCKET NUMBER: 27129/9430
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (312) 346-5750
       TELEFAX: (312) 984-9740
       TELEX: 25-3856
  INFORMATION FOR SEQ ID NO: 23:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-07-718-274A-23
  Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
            3; Conservative
                              0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           1 ATN 3
Qу
             2 ATN 4
RESULT 13
US-07-755-161A-9
; Sequence 9, Application US/07755161A
; Patent No. 5304633
  GENERAL INFORMATION:
    APPLICANT: Mamoru TOMITA et al.
    TITLE OF INVENTION: Antimicrobial Peptides and an
    TITLE OF INVENTION: Antimicrobial Agent
    NUMBER OF SEQUENCES: 10
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Wenderoth, Lind & Ponack
      STREET: 805 Fifteenth Street, N.W., #700
      CITY: Washington
      STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 500Kb
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: MS-DOS
      SOFTWARE: DisplayWrite
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/755,161A
      FILING DATE: 19910905
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
     NAME: Warren M. Cheek Jr.
      REGISTRATION NUMBER: 33,367
```

```
REFERENCE/DOCKET NUMBER:
;
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-371-8850
      TELEFAX: 202-371-8856
      TELEX:
  INFORMATION FOR SEQ ID NO: 9:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE:
    HYPOTHETICAL:
    ANTI-SENSE:
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
      ORGANISM:
      STRAIN:
     INDIVIDUAL ISOLATE:
     DEVELOPMENTAL STAGE:
     HAPLOTYPE:
     TISSUE TYPE:
     CELL TYPE:
     CELL LINE:
      ORGANELLE:
   IMMEDIATE SOURCE:
     LIBRARY:
      CLONE:
   POSITION IN GENOME:
      CHROMOSOME/SEGMENT:
      MAP POSITION:
      UNITS:
    FEATURE:
      NAME/KEY: modified site
      LOCATION: 10
      IDENTIFICATION METHOD:
      OTHER INFORMATION: /note= "thiol group of
      OTHER INFORMATION: Cys residue at location 10 connected by disulfide
bond with
      OTHER INFORMATION: thiol group of Cys residue at location 35 of SEQ ID
NO. 8"
    PUBLICATION INFORMATION:
;
      AUTHORS:
;
      TITLE:
      JOURNAL:
      VOLUME:
     ISSUE:
     PAGES:
      DATE:
      DOCUMENT NUMBER:
      FILING DATE:
      PUBLICATION DATE:
       RELEVANT RESIDUES IN SEQ ID NO:
US-07-755-161A-9
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0:
           7 GRR 9
Qy
             | | | |
           1 GRR 3
Db
RESULT 14
US-07-891-174-9
; Sequence 9, Application US/07891174
; Patent No. 5317084
; GENERAL INFORMATION:
     APPLICANT: Mamoru TOMITA et al.
     TITLE OF INVENTION: Antimicrobial Peptides and an
     TITLE OF INVENTION: Antimicrobial Agent
     NUMBER OF SEQUENCES: 10
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Wenderoth, Lind & Ponack
      STREET: 805 Fifteenth Street, N.W., #700
      CITY: Washington
;
      STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005
    COMPUTER READABLE FORM:
;
      MEDIUM TYPE: Diskette, 5.25 inch, 500Kb
       COMPUTER: IBM Compatible
;
       OPERATING SYSTEM: MS-DOS
       SOFTWARE: DisplayWrite
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/891,174
       FILING DATE: 29-MAY-1992
       CLASSIFICATION: 530
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/755,161
       FILING DATE: 05-SEP-1991
     ATTORNEY/AGENT INFORMATION:
      NAME: Warren M. Cheek Jr.
       REGISTRATION NUMBER: 33,367
       REFERENCE/DOCKET NUMBER:
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 202-371-8850
       TELEFAX: 202-371-8856
       TELEX:
   INFORMATION FOR SEQ ID NO: 9:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
     MOLECULE TYPE:
     HYPOTHETICAL:
    ANTI-SENSE:
    FRAGMENT TYPE:
     ORIGINAL SOURCE:
      ORGANISM:
      STRAIN:
      INDIVIDUAL ISOLATE:
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DEVELOPMENTAL STAGE:
      HAPLOTYPE:
      TISSUE TYPE:
      CELL TYPE:
      CELL LINE:
;
      ORGANELLE:
;
    IMMEDIATE SOURCE:
;
      LIBRARY:
      CLONE:
;
    POSITION IN GENOME:
      CHROMOSOME/SEGMENT:
      MAP POSITION:
      UNITS:
    FEATURE:
     NAME/KEY: modified site
      LOCATION: 10
      IDENTIFICATION METHOD:
      OTHER INFORMATION:
                          /note= "thiol group of
      OTHER INFORMATION: Cys residue at location 10 connected by disulfide
bond with
      OTHER INFORMATION: thiol group of Cys residue at location 35 of SEQ ID
NO. 8"
    PUBLICATION INFORMATION:
;
      AUTHORS:
;
      TITLE:
;
       JOURNAL:
      VOLUME:
      ISSUE:
      PAGES:
      DATE:
      DOCUMENT NUMBER:
       FILING DATE:
       PUBLICATION DATE:
       RELEVANT RESIDUES IN SEQ ID NO:
US-07-891-174-9
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.1e+03;
                                0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
            3; Conservative
            7 GRR 9
Qу
              III
Db
            1 GRR 3
RESULT 15
US-07-912-900-2
; Sequence 2, Application US/07912900
; Patent No. 5349125
   GENERAL INFORMATION:
     APPLICANT: Holton, Timothy A.
     APPLICANT: Cornish, Edwina C.
     APPLICANT: Kovacic, Filippa
                 Tanaka, Yoshikazu
     APPLICANT:
     APPLICANT:
                 Lester, Diane R.
     TITLE OF INVENTION: GENETIC SEQUENCES ENCODING FLAVONOID
     TITLE OF INVENTION: PATHWAY ENZYMES AND USES THEREFOR
```

```
NUMBER OF SEQUENCES:
                          29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/912,900
      FILING DATE: 19920713
      CLASSIFICATION: 800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 2:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-912-900-2
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                              0; Mismatches
                                                               0; Gaps
                                                                           0;
                                               0; Indels
 Matches
            3; Conservative
           7 GRR 9
Qу
             5 GRR 7
Db
RESULT 16
US-07-912-900-13
; Sequence 13, Application US/07912900
; Patent No. 5349125
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING FLAVONOID
    TITLE OF INVENTION: PATHWAY ENZYMES AND USES THEREFOR
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
```

```
ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/912,900
      FILING DATE: 19920713
      CLASSIFICATION: 800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-912-900-13
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative
                              0; Mismatches
                                                  0; Indels
                                                               0; Gaps
                                                                           0;
 Matches
           7 GRR 9
Qу
             +11
           5 GRR 7
Db
RESULT 17
US-07-912-900-15
; Sequence 15, Application US/07912900
; Patent No. 5349125
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
               Kovacic, Filippa
    APPLICANT:
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING FLAVONOID
    TITLE OF INVENTION: PATHWAY ENZYMES AND USES THEREFOR
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
       STREET: 400 Garden City Plaza
```

```
CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/912,900
      FILING DATE: 19920713
      CLASSIFICATION: 800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 15:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
US-07-912-900-15
 Query Match
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 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                               0; Mismatches 0; Indels
 Matches
           3; Conservative
                                                                0; Gaps
                                                                            0;
Qy
           7 GRR 9
             III
           5 GRR 7
Dh
RESULT 18
US-08-029-333-21
; Sequence 21, Application US/08029333
; Patent No. 5399667
  GENERAL INFORMATION:
    APPLICANT: Frazier, William A.
    APPLICANT: Kosfeld, Minh D.
    TITLE OF INVENTION: Thrombospondin Receptor Binding Peptides
    NUMBER OF SEQUENCES:
                          47
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scott J. Meyer, Monsanto Co., A3SG
      STREET: 800 N. Lindbergh Blvd.
      CITY: St. Louis
      STATE: Missouri
      COUNTRY: USA
      ZIP: 63167
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
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COMPUTER: IBM PC compatible
;
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/029,333
      FILING DATE: 19930305
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
      NAME: Meyer, Scott J.
      REGISTRATION NUMBER: 25,275
      REFERENCE/DOCKET NUMBER: 07-24(982)A
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (314)694-3117
      TELEFAX: (314)694-5435
  INFORMATION FOR SEQ ID NO: 21:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-029-333-21
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                            0; Gaps
                                                                           0;
 Matches
           5 KTG 7
Qу
             Db
           9 KTG 11
RESULT 19
US-08-149-106-23
; Sequence 23, Application US/08149106
; Patent No. 5411941
  GENERAL INFORMATION:
    APPLICANT: Grinna, Lynn
    APPLICANT: Parsons, Thomas F.
    APPLICANT: Theofan, Georgia
    TITLE OF INVENTION: Osteogenic Factor
    NUMBER OF SEQUENCES: 63
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
      ADDRESSEE: Bicknell
      STREET: Two First National Plaza, 20 South Clark
      STREET: Street
      CITY: Chicago
      STATE: Illinois
      COUNTRY: USA
      ZIP: 60603
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/149,106
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FILING DATE:
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/415,555
      FILING DATE: 04-OCT-1989
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 07/256,034
      FILING DATE: 11-OCT-1988
    ATTORNEY/AGENT INFORMATION:
      NAME: Sharp, Jeffrey S.
      REGISTRATION NUMBER: 31,879
      REFERENCE/DOCKET NUMBER: 27129/9430
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (312) 346-5750
      TELEFAX: (312) 984-9740
      TELEX: 25-3856
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-149-106-23
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
  Best Local Similarity
                         100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
           1 ATN 3
Qу
             -111
           2 ATN 4
Db
RESULT 20
US-07-841-997A-34
; Sequence 34, Application US/07841997A
; Patent No. 5422254
  GENERAL INFORMATION:
    APPLICANT: Londesborough, John
    APPLICANT: Vuorio, Outi
    TITLE OF INVENTION: A method to increase the trehalose content
    TITLE OF INVENTION: of organisms by transforming them with the
    TITLE OF INVENTION: structural genes for the short and long chains
    TITLE OF INVENTION: yeast trehalose synthase.
    NUMBER OF SEQUENCES: 43
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Alko Ltd.
      STREET: PO Box 350
      CITY: Helsinki
      STATE: -
      COUNTRY: Finland
      ZIP: SF-00101
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 720 Kb
      COMPUTER: IBM PC/XT/AT
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: WP5.1 file exported as DOS text file
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CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/841,997A
      FILING DATE: 19920228
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/836,021
      FILING DATE: February 14, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME: Mary E. Gormley
      REGISTRATION NUMBER: 34409
      REFERENCE/DOCKET NUMBER: 920085A
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202)659-2930
      TELEFAX: (202)887-0357
      TELEX: 440142
  INFORMATION FOR SEQ ID NO: 34:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: Linear
    MOLECULE TYPE: Peptide
    HYPOTHETICAL: No
    FRAGMENT TYPE: N-terminal
US-07-841-997A-34
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           2 TNK 4
Qу
             \perp \perp \perp
           9 TNK 11
Db
RESULT 21
US-08-037-486-6
; Sequence 6, Application US/08037486
; Patent No. 5470831
  GENERAL INFORMATION:
    APPLICANT: Whitman, Russell B.
    APPLICANT: Wohl, Robert
    APPLICANT: Duff, Ronald G.
    TITLE OF INVENTION: Angiogenic Peptides
    NUMBER OF SEQUENCES: 12
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
       STREET: 1155 Avenue of the Americas
      CITY: New York
       STATE: N.Y.
       COUNTRY: U.S.A.
       ZIP: 10036
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
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APPLICATION NUMBER: US/08/037,486
      FILING DATE:
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US 07/631,823
      FILING DATE: 21-DEC-1990
   ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 7142-004-999
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-790-9090
      TELEFAX: 212 869-9741
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: unknown
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-037-486-6
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                            0;
           9 RPR 11
Qу
             \mathbf{H}\mathbf{H}
           6 RPR 8
Db
RESULT 22
US-08-336-087-4
; Sequence 4, Application US/08336087
; Patent No. 5503829
  GENERAL INFORMATION:
    APPLICANT: Ladant, Daniel
    APPLICANT: Leclerc, Claude
    APPLICANT: Sebo, Peter
    APPLICANT: Ullmann, Agnes
    TITLE OF INVENTION: Recombinant Mutants for Inducing
    TITLE OF INVENTION: Specific Immune Responses
    NUMBER OF SEQUENCES: 7
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
      ADDRESSEE: Dunner
      STREET: 1300 I Street, N.W.
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
      ZIP: 20005-3315
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
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APPLICATION NUMBER: US/08/336,087
;
      FILING DATE:
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/011,644
      FILING DATE: 29-JAN-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Meyers, Kenneth J.
      REGISTRATION NUMBER: 25,146
      REFERENCE/DOCKET NUMBER: 03495-0109-01000
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-408-4000
      TELEFAX: 202-408-4400
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-336-087-4
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
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                                                                           0;
 Matches
           2 TNK 4
Qу
             111
           7 TNK 9
Db
RESULT 23
US-08-298-021-23
; Sequence 23, Application US/08298021
; Patent No. 5508263
  GENERAL INFORMATION:
    APPLICANT: Grinna, Lynn
    APPLICANT: Parsons, Thomas F.
    APPLICANT: Theofan, Georgia
    TITLE OF INVENTION: Heterodimeric Osteogenic Factor
    NUMBER OF SEQUENCES: 63
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
      STREET: 6300 Sears Tower, 233 South Wacker Drive
      CITY: Chicago
      STATE: Illinois
      COUNTRY: United States of America
      ZIP: 60606-64023
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/298,021
      FILING DATE:
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 08/149,106
       FILING DATE: 11-OCT-1993
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/718,274
      FILING DATE: 20-JUN-1991
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/415,555
      FILING DATE: 04-OCT-1989
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/256,034
      FILING DATE: 11-OCT-1988
    ATTORNEY/AGENT INFORMATION:
      NAME:
            Sharp, Jeffrey S.
      REGISTRATION NUMBER: 31,879
      REFERENCE/DOCKET NUMBER: 27129/32196
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 312/474-6300
      TELEFAX: 312/474-0448
      TELEX: 25-3856
  INFORMATION FOR SEQ ID NO: 23:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-298-021-23
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
           1 ATN 3
Qy
             111
           2 ATN 4
Db
RESULT 24
US-07-609-716-15
; Sequence 15, Application US/07609716
; Patent No. 5514581
  GENERAL INFORMATION:
    APPLICANT: Ferrari, Franco A.
    APPLICANT: Cappello, Joseph
    TITLE OF INVENTION: Functional Recombinantly Prepared
    TITLE OF INVENTION: Synthetic Protein Polymer
    NUMBER OF SEQUENCES: 118
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert
      STREET: Four Embarcadero Center, Suite 3400
      CITY: San Francisco
      STATE: CA
      COUNTRY: US
      ZIP: 94111
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/609,716
      FILING DATE: 06-NOV-1990
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
     NAME: Rowland, Bertram I
      REGISTRATION NUMBER: 20015
      REFERENCE/DOCKET NUMBER: A-55186-3/BIR
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 415-781-1989
      TELEFAX: 415-398-3249
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-609-716-15
  Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
           6 TGR 8
Qy
             111
Db
           3 TGR 5
RESULT 25
US-08-178-570-75
; Sequence 75, Application US/08178570
; Patent No. 5532167
  GENERAL INFORMATION:
    APPLICANT: Lewis C. Cantley
    APPLICANT: Zhou Song yang
    TITLE OF INVENTION: Substrate Specificity of Protein Kinases
    NUMBER OF SEQUENCES: 77
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: LAHIVE & COCKFIELD
      STREET: 60 STATE STREET, suite 510
      CITY: BOSTON
      STATE: MASSACHUSETTS
      COUNTRY: USA
      ZIP: 02109-1875
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: ASCII text
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/178,570
      FILING DATE: JANUARY 7, 1994
     CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
     NAME: DeConti, Giulio A., Jr.
```

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REGISTRATION NUMBER: 31,503
       REFERENCE/DOCKET NUMBER: BBI-004
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: (617) 227-7400
      TELEFAX: (617) 227-5941
  INFORMATION FOR SEQ ID NO: 75:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
     FRAGMENT TYPE: internal
US-08-178-570-75
  Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           8 RRP 10
Qу
             \perp
Db
           2 RRP 4
RESULT 26
US-08-041-774-2
; Sequence 2, Application US/08041774
; Patent No. 5550114
  GENERAL INFORMATION:
    APPLICANT: Strayer, David S.
    TITLE OF INVENTION: EPIDERMAL GROWTH FACTOR INHIBITOR
    NUMBER OF SEQUENCES: 5
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: COOPER & DUNHAM
      STREET: 30 Rockefeller Plaza
      CITY: New York
      STATE: New York
      COUNTRY: USA
      ZIP: 10112
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.24
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/041,774
      FILING DATE: 19930402
      CLASSIFICATION: 514
    ATTORNEY/AGENT INFORMATION:
      NAME: Zivin, No. 5550114man H.
      REGISTRATION NUMBER: 25,385
      REFERENCE/DOCKET NUMBER:
                                2560/42559
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 977-9550
      TELEFAX: (212) 977-9809
      TELEX: 422523 COOP UI
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
```

```
LENGTH: 11 amino acids
;
      TYPE: amino acid
      STRANDEDNESS: unknown
      TOPOLOGY: linear
    MOLECULE TYPE: protein
    HYPOTHETICAL: N
    ANTI-SENSE: N
    FRAGMENT TYPE: internal
US-08-041-774-2
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                           0;
           4 KKT 6
Qy
             111
           8 KKT 10
Db
RESULT 27
US-08-217-188A-35
; Sequence 35, Application US/08217188A
; Patent No. 5554724
  GENERAL INFORMATION:
    APPLICANT: Melief, Cornelis J. M.
    APPLICANT: Visseren, M. J. W.
    APPLICANT: Kast; W. M.
    APPLICANT: van der Bruggen, Pierre
    APPLICANT: Boon-Falleur, Thierry
    TITLE OF INVENTION: Isolated Tumor Rejection Antigen
    TITLE OF INVENTION: Precursor MAGE-2 Derived Peptides, and Uses Thereof
    NUMBER OF SEQUENCES: 62
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
       COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/217,188A
      FILING DATE: 24-MARCH-1994
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5554724man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5340
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
       TELEFAX: (212) 838-3884
  INFORMATION FOR SEQ ID NO: 35:
    SEQUENCE CHARACTERISTICS:
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LENGTH: 11 amino acid residues
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-217-188A-35
  Query Match
                          27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.1e+03;
            3; Conservative 0; Mismatches 0;
                                                       Indels
                                                                  0; Gaps
                                                                              0;
            5 KTG 7
Qу
              Db
            4 KTG 6
RESULT 28
US-08-217-188A-60
; Sequence 60, Application US/08217188A
; Patent No. 5554724
  GENERAL INFORMATION:
     APPLICANT: Melief, Cornelis J. M.
    APPLICANT: Visseren, M. J. W.
    APPLICANT: Kast; W. M.
    APPLICANT: van der Bruggen, Pierre
    APPLICANT: Boon-Falleur, Thierry
    TITLE OF INVENTION: Isolated Tumor Rejection Antigen
TITLE OF INVENTION: Precursor MAGE-2 Derived Peptides, and Uses Thereof
    NUMBER OF SEQUENCES: 62
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/217,188A
      FILING DATE: 24-MARCH-1994
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5554724man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5340
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
  INFORMATION FOR SEQ ID NO: 60:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: protein
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Qу

7 GRR 9

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Query Match
                       27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
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           5 KTG 7
Qу
             111
           1 KTG 3
Db
RESULT 29
US-08-170-095B-6
; Sequence 6, Application US/08170095B
; Patent No. 5563254
  GENERAL INFORMATION:
    APPLICANT: Hoffman, Stephen J.
    APPLICANT: Nagai, Kiyoshi
    TITLE OF INVENTION: Blood Substitutes
    NUMBER OF SEQUENCES: 36
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Somatogen, Inc.
      STREET: 2545 Central Avenue
      CITY: Boulder
      STATE: Colorado
      ZIP: 80301
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
      COMPUTER: Apple Macintosh
      OPERATING SYSTEM: System 7.0.1
      SOFTWARE: Microsoft Word 5.0a
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/170,095B
      FILING DATE: December 20, 1993
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
     NAME: No. 5563254ak, Henry P.
      REGISTRATION NUMBER: 33200
      REFERENCE/DOCKET NUMBER: Hoffman 2A/CONT2
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 303-541-3322
      TELEFAX: 303-444-3013
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: unknown to applicant
    MOLECULE TYPE: peptide
    HYPOTHETICAL: no
US-08-170-095B-6
 Query Match
                        27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                          0;
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RESULT 30
US-08-285-309-2
; Sequence 2, Application US/08285309
; Patent No. 5569832
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION:
                         HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
       STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
       ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/285,309
       FILING DATE: 03-AUG-1994
      CLASSIFICATION:
                       800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633Z
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS:
                     single
      TOPOLOGY:
                linear
    MOLECULE TYPE: peptide
US-08-285-309-2
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           7 GRR 9
Qy
             \mathbf{I}
           5 GRR 7
Db
```

```
RESULT 31
US-08-285-309-13
; Sequence 13, Application US/08285309
: Patent No. 5569832
   GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION: HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/285,309
      FILING DATE: 03-AUG-1994
      CLASSIFICATION:
                       800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633Z
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-285-309-13
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
           7 GRR 9
QУ
             \perp
Db
           5 GRR 7
```

```
RESULT 32
US-08-285-309-15
; Sequence 15, Application US/08285309
; Patent No. 5569832
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION: HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
     COUNTRY: U.S.A.
     ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/285,309
      FILING DATE: 03-AUG-1994
      CLASSIFICATION: 800
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633Z
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 15:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
US-08-285-309-15
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
 Matches
                                                                           0;
           7 GRR 9
Qу
             111
Db
           5 GRR 7
```

RESULT 33 US-08-313-681A-25

```
; Sequence 25, Application US/08313681A
; Patent No. 5618675
  GENERAL INFORMATION:
    APPLICANT: Larrick, James W.
    APPLICANT: Wright, Susan C.
    APPLICANT: Hirata, Mishimasa
    TITLE OF INVENTION: Human Cationic Proteins Having
    TITLE OF INVENTION: Lipopolysaccharide Binding and Anti-Coagulant Activity
    NUMBER OF SEQUENCES: 30
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend Khourie and Crew
      STREET: One Market Plaza, Steuart Tower, Suite 2000
      CITY: San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94105
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/313,681A
      FILING DATE:
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Heslin, James M.
      REGISTRATION NUMBER: 29,541
      REFERENCE/DOCKET NUMBER: 15325-9-1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 415-326-2400
      TELEFAX: 415-326-2422
  INFORMATION FOR SEQ ID NO: 25:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-313-681A-25
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
                         100.0%; Pred. No. 3.1e+03;
 Best Local Similarity
 Matches
                              0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                            0;
           3; Conservative
Qу
           9 RPR 11
             +11
           7 RPR 9
Db
RESULT 34
US-08-378-761A-68
; Sequence 68, Application US/08378761A
; Patent No. 5635384
  GENERAL INFORMATION:
    APPLICANT: WALSH, TERENCE A
     APPLICANT: HEY, TIMOTHY D
```

```
APPLICANT: MORGAN, ALICE ER
    TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
    TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD
OF
    TITLE OF INVENTION: USING
    NUMBER OF SEQUENCES: 81
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: ANDREA T. BORUCKI
      STREET: 9330 ZIONSVILLE ROAD
      CITY: INDIANAPOLIS
      STATE: IN
      COUNTRY: US
      ZIP: 46268
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/378,761A
     FILING DATE: 26-JAN-1995
      CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
      NAME: BORUCKI, ANDREA T
      REGISTRATION NUMBER: 33651
      REFERENCE/DOCKET NUMBER: 38272B
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (317) 337-4846
  INFORMATION FOR SEQ ID NO: 68:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-378-761A-68
                         27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
Qу
           3 NKK 5
             -111
Db
           2 NKK 4
RESULT 35
US-08-378-761A-70
; Sequence 70, Application US/08378761A
; Patent No. 5635384
; GENERAL INFORMATION:
    APPLICANT: WALSH, TERENCE A
    APPLICANT: HEY, TIMOTHY D
    APPLICANT: MORGAN, ALICE ER
    TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
    TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD
OF
```

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TITLE OF INVENTION: USING
;
    NUMBER OF SEQUENCES: 81
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: ANDREA T. BORUCKI
      STREET: 9330 ZIONSVILLE ROAD
      CITY: INDIANAPOLIS
      STATE: IN
      COUNTRY: US
      ZIP: 46268
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/378,761A
      FILING DATE: 26-JAN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
     NAME: BORUCKI, ANDREA T
      REGISTRATION NUMBER: 33651
      REFERENCE/DOCKET NUMBER: 38272B
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (317) 337-4846
  INFORMATION FOR SEQ ID NO: 70:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-378-761A-70
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
 Matches
                                                             0; Gaps
                                                                           0;
Qу
           3 NKK 5
             -1.11
           4 NKK 6
Db
RESULT 36
US-08-313-075A-12
; Sequence 12, Application US/08313075A
; Patent No. 5639870
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Tanaka, Yoshikazu
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING FLAVONOID
    TITLE OF INVENTION: PATHWAY ENZYMES AND USES THEREFOR
    NUMBER OF SEQUENCES: 58
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
```

```
STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/313,075A
      FILING DATE: 30-NOV-1994
      CLASSIFICATION: 800
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PL 1538/92
       FILING DATE: 27-MAR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PL 6698/93
      FILING DATE: 07-JAN-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PCT/AU93/00127
      FILING DATE: 25-MAR-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
;
       REGISTRATION NUMBER: 31,346
       REFERENCE/DOCKET NUMBER: 9433
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (516) 742-4343
       TELEFAX: (516) 742-4366
       TELEX: 230 901 SANS UR
   INFORMATION FOR SEQ ID NO: 12:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-313-075A-12
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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                                                                               0;
            3; Conservative 0; Mismatches 0; Indels
  Matches
            7 GRR 9
Qγ
              III
            5 GRR 7
Db
RESULT 37
US-08-313-075A-14
; Sequence 14, Application US/08313075A
; Patent No. 5639870
   GENERAL INFORMATION:
     APPLICANT: Holton, Timothy A.
     APPLICANT: Cornish, Edwina C.
     APPLICANT: Tanaka, Yoshikazu
     TITLE OF INVENTION: GENETIC SEQUENCES ENCODING FLAVONOID TITLE OF INVENTION: PATHWAY ENZYMES AND USES THEREFOR
```

```
NUMBER OF SEQUENCES: 58
;
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/313,075A
      FILING DATE: 30-NOV-1994
      CLASSIFICATION: 800
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PL 1538/92
      FILING DATE: 27-MAR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PL 6698/93
       FILING DATE: 07-JAN-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: AU PCT/AU93/00127
      FILING DATE: 25-MAR-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
       REGISTRATION NUMBER: 31,346
       REFERENCE/DOCKET NUMBER: 9433
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (516) 742-4343
       TELEFAX: (516) 742-4366
       TELEX: 230 901 SANS UR
   INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-313-075A-14
                         27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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                              0; Mismatches 0; Indels 0; Gaps
           3; Conservative
  Matches
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Qу
              111
            5 GRR 7
Db
RESULT 38
US-08-485-286-68
; Sequence 68, Application US/08485286
; Patent No. 5646026
; Patent No. 5646026 5646119
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GENERAL INFORMATION:
    APPLICANT: WALSH, TERENCE A
    APPLICANT: HEY, TIMOTHY D
;
    APPLICANT: MORGAN, ALICE ER
    TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
    TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD
OF
    TITLE OF INVENTION: USING
;
    NUMBER OF SEQUENCES: 81
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: ANDREA T. BORUCKI
      STREET: 9330 ZIONSVILLE ROAD
      CITY: INDIANAPOLIS
      STATE: IN
      COUNTRY: US
      ZIP: 46268
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/485,286
       FILING DATE:
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/378761
       FILING DATE: 26-JAN-1995
     ATTORNEY/AGENT INFORMATION:
       NAME: BORUCKI, ANDREA T
       REGISTRATION NUMBER: 33651
       REFERENCE/DOCKET NUMBER: 38272B
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (317) 337-4846
   INFORMATION FOR SEQ ID NO: 68:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-485-286-68
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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  Matches 3; Conservative 0; Mismatches 0; Indels 0;
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Qу
              \Box
            2 NKK 4
Db
RESULT 39
US-08-485-286-70
; Sequence 70, Application US/08485286
 ; Patent No. 5646026
 ; Patent No. 5646026 5646119
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GENERAL INFORMATION:
     APPLICANT: WALSH, TERENCE A
     APPLICANT: HEY, TIMOTHY D
     APPLICANT: MORGAN, ALICE ER
     TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD
OF
     TITLE OF INVENTION: USING
;
    NUMBER OF SEQUENCES: 81
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: ANDREA T. BORUCKI
      STREET: 9330 ZIONSVILLE ROAD
      CITY: INDIANAPOLIS
      STATE: IN
      COUNTRY: US
     ZIP: 46268
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/485,286
      FILING DATE:
      CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/378761
      FILING DATE: 26-JAN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: BORUCKI, ANDREA T
      REGISTRATION NUMBER: 33651
      REFERENCE/DOCKET NUMBER: 38272B
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: (317) 337-4846
  INFORMATION FOR SEQ ID NO: 70:
    SEQUENCE CHARACTERISTICS:
;
      LENGTH: 11 amino acids
;
      TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-485-286-70
  Query Match
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 Matches
                                                                  0; Gaps
                                                                               0;
            3 NKK 5
Qу
             111
            4 NKK 6
RESULT 40
US-08-344-636-15
; Sequence 15, Application US/08344636
; Patent No. 5648336
; GENERAL INFORMATION:
```

```
APPLICANT: STEWART, JOHN M.
     APPLICANT: GERA, LAJOS
     APPLICANT: WHALLEY, ERIC
     TITLE OF INVENTION: BRADYKININ ANTAGONIST PEPTIDES
TITLE OF INVENTION: CONTAINING INDANE-SUBSTITUTED AMINO ACIDS
     NUMBER OF SEQUENCES: 19
     CORRESPONDENCE ADDRESS:
     ADDRESSEE: CUSHMAN DARBY & CUSHMAN, L.L.P.
      STREET: 1100 New York Avenue, N.W.
      CITY: Washington
       STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005-3918
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/344,636
      FILING DATE: 18-NOV-1994
      CLASSIFICATION: 514
    ATTORNEY/AGENT INFORMATION:
      NAME: KOKULIS, PAUL N.
      REGISTRATION NUMBER: 16,773
      REFERENCE/DOCKET NUMBER: 216471/DKT. 19
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202) 861-3000
      TELEFAX: (202) 822-0944
      TELEX: 6714627 CUSH
  INFORMATION FOR SEQ ID NO: 15:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-344-636-15
  Query Match
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            3; Conservative 0; Mismatches 0; Indels 0; Gaps
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                                                                             0;
            8 RRP 10
Qу
             111
           2 RRP 4
Dh
RESULT 41
US-08-344-636-18
; Sequence 18, Application US/08344636
; Patent No. 5648336
  GENERAL INFORMATION:
    APPLICANT: STEWART, JOHN M.
    APPLICANT: GERA, LAJOS
    APPLICANT: WHALLEY, ERIC
    TITLE OF INVENTION: BRADYKININ ANTAGONIST PEPTIDES
```

```
TITLE OF INVENTION: CONTAINING INDANE-SUBSTITUTED AMINO ACIDS
    NUMBER OF SEQUENCES: 19
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: CUSHMAN DARBY & CUSHMAN, L.L.P.
      STREET: 1100 New York Avenue, N.W.
      CITY: Washington
      STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005-3918
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/344,636
     FILING DATE: 18-NOV-1994
;
      CLASSIFICATION: 514
   ATTORNEY/AGENT INFORMATION:
      NAME: KOKULIS, PAUL N.
      REGISTRATION NUMBER: 16,773
      REFERENCE/DOCKET NUMBER: 216471/DKT. 19
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202) 861-3000
      TELEFAX: (202) 822-0944
      TELEX: 6714627 CUSH
  INFORMATION FOR SEQ ID NO: 18:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-344-636-18
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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           8 RRP 10
Qу
             -111
          2 RRP 4
Db
RESULT 42
US-08-256-771-32
; Sequence 32, Application US/08256771
; Patent No. 5656591
   GENERAL INFORMATION:
     APPLICANT: Mamoru TOMITA et al.
     TITLE OF INVENTION: ANTIMICROBIAL AGENTS AND METHOD FOR TREATING
     TITLE OF INVENTION: PRODUCTS THEREWITH
     NUMBER OF SEQUENCES: 32
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: Wenderoth, Lind & Ponack
       STREET: 805 Fifteenth Street, N.W., #700
       CITY: Washington
```

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STATE: D.C.
;
      COUNTRY: U.S.A.
      ZIP: 20005
;
     COMPUTER READABLE FORM:
;
      MEDIUM TYPE: Diskette, 5.25 inch, 500 kb
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: MS-DOS
      SOFTWARE: Wordperfect 5.1
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/256,771
      FILING DATE: July 22, 1994
      CLASSIFICATION: 514
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME: Warren M. Cheek, Jr.
       REGISTRATION NUMBER: 33,367
      REFERENCE/DOCKET NUMBER:
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 202-371-8850
       TELEFAX:
       TELEX:
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
;
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
     FEATURE:
      NAME/KEY:
;
       LOCATION:
       IDENTIFICATION METHOD:
       OTHER INFORMATION: /note= "Cys at position 10 is linked to
       OTHER INFORMATION: Cys at position 35 of SEQ ID No. 5656591 10 by
disulfide bond"
US-08-256-771-32
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
  Matches
            7 GRR 9
Qу
              111
            1 GRR 3
Db
RESULT 43
US-08-396-866-6
; Sequence 6, Application US/08396866
; Patent No. 5661124
  GENERAL INFORMATION:
     APPLICANT: Hoffman, Stephen J.
     APPLICANT: Nagai, Kiyoshi
     TITLE OF INVENTION: Blood Substitutes
     NUMBER OF SEQUENCES: 34
```

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CORRESPONDENCE ADDRESS:
      ADDRESSEE: Somatogen, Inc.
      STREET: 5797 Central Avenue
      CITY: Boulder
      STATE: Colorado
      ZIP: 80301
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
      COMPUTER: Apple Macintosh
      OPERATING SYSTEM: System 7.0.1
      SOFTWARE: Microsoft Word 5.0a
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/396,866
      FILING DATE:
;
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/08/062,780
     FILING DATE: May 17, 1993
;
   ATTORNEY/AGENT INFORMATION:
      NAME: No. 5661124ak, Henry P.
;
      REGISTRATION NUMBER: 33200
;
      REFERENCE/DOCKET NUMBER: Hoffman
;
      REFERENCE/DOCKET NUMBER: 2A/CONT1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 303-541-3322
      TELEFAX: 303-444-3013
  INFORMATION FOR SEQ ID NO: 6:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11
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      TYPE: amino acid
      TOPOLOGY: unknown to applicant
    MOLECULE TYPE: peptide
    HYPOTHETICAL: no
US-08-396-866-6
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 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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 Matches
           7 GRR 9
Qy
             111
           5 GRR 7
Db
RESULT 44
US-08-336-343A-24
; Sequence 24, Application US/08336343A
; Patent No. 5677144
  GENERAL INFORMATION:
    APPLICANT: Ullrich, Axel
    APPLICANT: Alves, Frauke
    TITLE OF INVENTION: CCK-2, A No. 5677144el Receptor Tyrosine Kinase
    NUMBER OF SEQUENCES: 43
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
       STREET: 1155 Avenue of the Americas
      CITY: New York
```

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STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/336,343A
      FILING DATE: 08-NOV-1994
;
      CLASSIFICATION: 435
;
    ATTORNEY/AGENT INFORMATION:
      NAME: Coruzzi, Laura A.
      REGISTRATION NUMBER: 30,742
      REFERENCE/DOCKET NUMBER: 7683-065
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 24:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-336-343A-24
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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                              0; Mismatches
                                                0; Indels
            3; Conservative
  Matches
            9 RPR 11
Qу
              111
            1 RPR 3
Db
RESULT 45
US-08-469-582-7
; Sequence 7, Application US/08469582
; Patent No. 5677276
   GENERAL INFORMATION:
     APPLICANT: Dickerson, Kenneth T.
     APPLICANT: Glass, James R.
     APPLICANT: Liu, Lin-Shu
     APPLICANT: Polarek, James W.
                Craig, William S.
     APPLICANT:
     APPLICANT: Mullen, Daniel G.
     APPLICANT: Cheng, Soan
     TITLE OF INVENTION: Immobilization of Peptides to
     TITLE OF INVENTION: Hyaluronate
     NUMBER OF SEQUENCES: 31
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: Campbell and Flores
       STREET: 4370 La Jolla Village Drive, Suite 700
       CITY: San Diego
       STATE: California
```

```
COUNTRY: USA
;
      ZIP: 92122
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/469,582
      FILING DATE: 05-JUN-1995
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/363,213
      FILING DATE: 23-DEC-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LA 1550
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 7:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
;
      TYPE: amino acid
      TOPOLOGY: linear
    FEATURE:
      NAME/KEY: Modified-site
      LOCATION: 11
      OTHER INFORMATION: /note= "Peptide is amidated at
      OTHER INFORMATION: C-terminus."
US-08-469-582-7
  Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
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           7 GRR 9
Qу
             1 GRR 3
RESULT 46
US-08-469-582-19
; Sequence 19, Application US/08469582
; Patent No. 5677276
  GENERAL INFORMATION:
    APPLICANT: Dickerson, Kenneth T.
    APPLICANT: Glass, James R.
    APPLICANT: Liu, Lin-Shu
    APPLICANT: Polarek, James W.
    APPLICANT: Craig, William S.
    APPLICANT: Mullen, Daniel G.
    APPLICANT: Cheng, Soan
    TITLE OF INVENTION: Immobilization of Peptides to
    TITLE OF INVENTION: Hyaluronate
    NUMBER OF SEQUENCES: 31
```

```
CORRESPONDENCE ADDRESS:
;
       ADDRESSEE: Campbell and Flores
;
       STREET: 4370 La Jolla Village Drive, Suite 700
;
       CITY: San Diego
;
       STATE: California
       COUNTRY: USA
       ZIP: 92122
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
;
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/469,582
       FILING DATE: 05-JUN-1995
       CLASSIFICATION: 530
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/363,213
       FILING DATE: 23-DEC-1994
    ATTORNEY/AGENT INFORMATION:
       NAME: Campbell, Cathryn A.
;
       REGISTRATION NUMBER: 31,815
       REFERENCE/DOCKET NUMBER: P-LA 1550
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (619) 535-9001
       TELEFAX: (619) 535-8949
   INFORMATION FOR SEQ ID NO: 19:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
;
       TYPE: amino acid
;
       TOPOLOGY: linear
     FEATURE:
       NAME/KEY: Modified-site
       LOCATION: 11
       OTHER INFORMATION: /note= "Peptide is amidated at
       OTHER INFORMATION: C-terminus."
US-08-469-582-19
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
  Matches 3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            7 GRR 9
Qу
              1 GRR 3
Db
RESULT 47
US-08-479-400-4
; Sequence 4, Application US/08479400
 ; Patent No. 5679784
   GENERAL INFORMATION:
     APPLICANT: Ladant, Daniel
     APPLICANT: Leclerc, Claude APPLICANT: Sebo, Peter
     APPLICANT: Ullmann, Agnes
     TITLE OF INVENTION: Recombinant Mutants for Inducing
```

```
TITLE OF INVENTION: Specific Immune Responses
    NUMBER OF SEQUENCES: 7
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
      ADDRESSEE: Dunner
      STREET: 1300 I Street, N.W.
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
      ZIP: 20005-3315
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/479,400
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 424
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/011,644
      FILING DATE: 29-JAN-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Meyers, Kenneth J.
      REGISTRATION NUMBER: 25,146
      REFERENCE/DOCKET NUMBER: 03495-0109-01000
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-408-4000
      TELEFAX: 202-408-4400
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-479-400-4
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
           3; Conservative
                              0; Mismatches 0; Indels
                                                              0; Gaps
                                                                           0;
           2 TNK 4
Qу
             111
Db
           7 TNK 9
RESULT 48
US-08-687-226-35
; Sequence 35, Application US/08687226
; Patent No. 5686068
  GENERAL INFORMATION:
    APPLICANT: Melief, Cornelis J. M.; Visseren, M. W.;
    APPLICANT: van der Burg, Sjoerd; van der Bruggen, Pierre;
    APPLICANT: Boon-Falleur, Thierry
    TITLE OF INVENTION: Isolated Peptides Derived From
    TITLE OF INVENTION: MAGE-2, Cytolytic T Cells Specific To Complexes Of
    TITLE OF INVENTION: Peptides And HLA-A2 Molecules, And Uses Thereof
```

```
NUMBER OF SEQUENCES: 72
    CORRESPONDENCE ADDRESS:
;
      ADDRESSEE: Felfe & Lynch
;
      STREET: 805 Third Avenue
;
      CITY: New York City
ï
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/687,226
       FILING DATE: 25-JULY-1996
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/217,188
      FILING DATE: 24-MARCH-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5686068man D.
;
       REGISTRATION NUMBER: 30,946
       REFERENCE/DOCKET NUMBER: LUD 5447
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (212) 688-9200
       TELEFAX: (212) 838-3884
   INFORMATION FOR SEQ ID NO: 35:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acid residues
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-687-226-35
                          27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                                             0;
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
  Matches
            5 KTG 7
Qу
              \mathbf{I}
            4 KTG 6
Db
RESULT 49
US-08-687-226-60
; Sequence 60, Application US/08687226
; Patent No. 5686068
   GENERAL INFORMATION:
     APPLICANT: Melief, Cornelis J. M.; Visseren, M. W.;
     APPLICANT: van der Burg, Sjoerd; van der Bruggen, Pierre;
     APPLICANT: Boon-Falleur, Thierry
     TITLE OF INVENTION: Isolated Peptides Derived From
     TITLE OF INVENTION: MAGE-2, Cytolytic T Cells Specific To Complexes Of
     TITLE OF INVENTION: Peptides And HLA-A2 Molecules, And Uses Thereof
     NUMBER OF SEQUENCES: 72
     CORRESPONDENCE ADDRESS:
```

```
ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/687,226
      FILING DATE: 25-JULY-1996
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/217,188
      FILING DATE: 24-MARCH-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5686068man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5447
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
  INFORMATION FOR SEQ ID NO: 60:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-687-226-60
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
 Matches
           5 KTG 7
Qу
             \perp
Db
           1 KTG 3
RESULT 50
US-08-687-226-67
; Sequence 67, Application US/08687226
; Patent No. 5686068
  GENERAL INFORMATION:
     APPLICANT: Melief, Cornelis J. M.; Visseren, M. W.;
                van der Burg, Sjoerd; van der Bruggen, Pierre;
     APPLICANT:
     APPLICANT: Boon-Falleur, Thierry
     TITLE OF INVENTION: Isolated Peptides Derived From
     TITLE OF INVENTION: MAGE-2, Cytolytic T Cells Specific To Complexes Of
     TITLE OF INVENTION: Peptides And HLA-A2 Molecules, And Uses Thereof
     NUMBER OF SEQUENCES: 72
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
       STREET: 805 Third Avenue
```

```
CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/687,226
      FILING DATE: 25-JULY-1996
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/217,188
;
      FILING DATE: 24-MARCH-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5686068man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5447
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
  INFORMATION FOR SEQ ID NO: 67:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-687-226-67
                         27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
 Matches
           5 KTG 7
Qу
             Db
           5 KTG 7
RESULT 51
US-08-615-181-88
; Sequence 88, Application US/08615181
; Patent No. 5756666
   GENERAL INFORMATION:
    APPLICANT: MASAFUMI, TAKIGUCHI
    APPLICANT: MIWA, KIYOSHI
     TITLE OF INVENTION: PEPTIDES CAPABLE OF INDUCING IMMUNE
     TITLE OF INVENTION: RESPONSE TO HIV AND ANTI-AIDS AGENT FOR PREVENTING AND
    TITLE OF INVENTION: CURING AIDS
    NUMBER OF SEQUENCES: 115
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
       ADDRESSEE: P.C.
       STREET: 1755 S. JEFFERSON DAVIS HIGHWAY, SUITE 400
       CITY: ARLINGTON
       STATE: VA
```

```
COUNTRY: USA
       ZIP: 22202
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/615,181
       FILING DATE: 04-APR-1996
       CLASSIFICATION: 424
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: PCT/JP94/01756
       FILING DATE: 19-OCT-1994
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 261302/1993
      FILING DATE: 19-OCT-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: OBLON, NORMAN F.
      REGISTRATION NUMBER: 24,618
      REFERENCE/DOCKET NUMBER: 10-796-0 PCT
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703-413-3000
       TELEFAX: 703-413-2220
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
;
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    ORIGINAL SOURCE:
      ORGANISM: HUMAN IMMUNODEFICIENCY VIRUS
US-08-615-181-88
  Query Match
                         27.3%; Score 3; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
                                                                0; Gaps
                                                                            0;
           5 KTG 7
Qу
             111
Db
           7 KTG 9
RESULT 52
US-08-477-509B-36
; Sequence 36, Application US/08477509B
; Patent No. 5770697
  GENERAL INFORMATION:
    APPLICANT: Ferrari, Franco A
    APPLICANT: Cappello, Joseph
    APPLICANT: Crissman, John w
    APPLICANT: Dorman, Mary A
    TITLE OF INVENTION: No. 5770697el Peptides Comprising Repetitive
    TITLE OF INVENTION: Units of Amino Acids and DNA Sequences Encoding the
Same
    NUMBER OF SEQUENCES: 112
```

```
CORRESPONDENCE ADDRESS:
;
      ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert
      STREET: Four Embarcadero Center, Suite 3400
      CITY: San Francisco
      STATE: California
      COUNTRY: US
      ZIP: 94111
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/477,509B
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/175,155
      FILING DATE: 29-DEC-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/053,049
      FILING DATE: 22-APR-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/114,618
      FILING DATE: 29-OCT-1987
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 06/927,258
      FILING DATE: 04-NOV-1986
    ATTORNEY/AGENT INFORMATION:
      NAME: Trecartin, Richard F.
      REGISTRATION NUMBER: 31,801
      REFERENCE/DOCKET NUMBER: A-55186-7/RFT/MTK
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 415-781-1989
       TELEFAX: 415-398-3249
   INFORMATION FOR SEQ ID NO: 36:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-477-509B-36
                         27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                                            0;
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
  Matches
            6 TGR 8
Qу
             \pm 111
           3 TGR 5
Db
RESULT 53
US-08-082-269D-5
; Sequence 5, Application US/08082269D
; Patent No. 5773227
```

```
GENERAL INFORMATION:
    APPLICANT: Kuhn, Michael
    APPLICANT: Meyer, Tobias
    APPLICANT: Allbritton, Nancy
    TITLE OF INVENTION: Bifunctional Chelating Polysaccharides
    NUMBER OF SEQUENCES: 9
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Molecular Probes, Inc.
      STREET: 4849 Pitchford Avenue
      CITY: Eugene
      STATE: Oregon
      COUNTRY: USA
     ZIP: 97402-9144
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch
      COMPUTER: IBM
      OPERATING SYSTEM: MS-DOS 6.2
      SOFTWARE: Text Editor
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/082,269D
      FILING DATE: 23-June-1993
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Helfenstein, Allegra J.
      REGISTRATION NUMBER: 34,179
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (503) 465-8300
      TELEFAX: (503)344-6504
  INFORMATION FOR SEQ ID NO: 5:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 AMINO ACIDS
      TYPE: Amino Acid
      TOPOLOGY: Linear
    MOLECULE TYPE: Peptide
    HYPOTHETICAL: no
    FRAGMENT TYPE:
    PUBLICATION INFORMATION:
      AUTHORS: Chelsky, Daniel, Ralph, Rebecca and Jonak, Gerald
      TITLE: Sequence Requirements for Synthetic Peptide-Mediated
Translocation to the
; Patent No. 5773227
      JOURNAL: Molecular and Cellular Biology
      VOLUME: 9
      ISSUE: 6
      PAGES: 2487-2492
      DATE: 1989
US-08-082-269D-5
                         27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
           9 RPR 11
Qу
             -111
Db
          8 RPR 10
```

```
RESULT 54
US-08-082-269D-8
; Sequence 8, Application US/08082269D
; Patent No. 5773227
  GENERAL INFORMATION:
    APPLICANT: Kuhn, Michael
    APPLICANT: Meyer, Tobias
APPLICANT: Allbritton, Nancy
    TITLE OF INVENTION: Bifunctional Chelating Polysaccharides
    NUMBER OF SEQUENCES: 9
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Molecular Probes, Inc.
      STREET: 4849 Pitchford Avenue
      CITY: Eugene
      STATE: Oregon
     COUNTRY: USA
ZIP: 97402-9144
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette, 3.5 inch
      COMPUTER: IBM
      OPERATING SYSTEM: MS-DOS 6.2
      SOFTWARE: Text Editor
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/082,269D
      FILING DATE: 23-June-1993
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
     NAME: Helfenstein, Allegra J.
      REGISTRATION NUMBER: 34,179
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (503) 465-8300
       TELEFAX: (503)344-6504
   INFORMATION FOR SEQ ID NO: 8:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 AMINO ACIDS
      TYPE: Amino Acid
      TOPOLOGY: Linear
    MOLECULE TYPE: Peptide
    HYPOTHETICAL: no
    FRAGMENT TYPE:
US-08-082-269D-8
                         27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
  Matches 3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           9 RPR 11
Qу
              111
           8 RPR 10
Db
RESULT 55
US-08-259-550A-5
; Sequence 5, Application US/08259550A
; Patent No. 5776892
; GENERAL INFORMATION:
     APPLICANT: Counts, David F.
```

```
APPLICANT: Duff, Ronald G.
;
    TITLE OF INVENTION: Anti-Inflammatory Peptides
    NUMBER OF SEQUENCES: 91
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: PENNIE & EDMONDS
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/259,550A
      FILING DATE: 16-JUN-1994
      CLASSIFICATION: 514
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 7142-011
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-8864/9741
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    ANTI-SENSE: NO
US-08-259-550A-5
 Query Match
                          27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
Qу
            9 RPR 11
              \parallel \parallel \parallel \parallel
Db
            6 RPR 8
RESULT 56
US-08-290-301-34
; Sequence 34, Application US/08290301
; Patent No. 5792921
  GENERAL INFORMATION:
    APPLICANT: Londesborough, John
    APPLICANT: Tunnela, Outi
    APPLICANT: Palva, Tupio
    APPLICANT: Holmstrom, Kjell-Ove
    APPLICANT: Welin, Bjorn
    APPLICANT: Mandel, Abul
```

```
TITLE OF INVENTION: Increasing the trehalose content
    TITLE OF INVENTION: of organisms by transforming them with combinations of
    TITLE OF INVENTION: the structural genes for trehalose synthase.
    NUMBER OF SEQUENCES: 85
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Alko Ltd.
      STREET: PO Box 350
      CITY: Helsinki
      STATE: -
      COUNTRY: Finland
      ZIP: SF-00101
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 720 Kb
      COMPUTER: IBM PC/XT/AT
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: WP5.1 file exported as DOS text file
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/290,301
      FILING DATE: 15 August 1994
      CLASSIFICATION:
                       424
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FI 943133
      FILING DATE: 29 June 1994
      APPLICATION NUMBER: PCT/FI93/00049
      FILING DATE: 15 February 1993
      APPLICATION NUMBER: 07/841,997
      FILING DATE: 28 February 1992
      APPLICATION NUMBER: 07/836,021
      FILING DATE: 14 February 1992
    ATTORNEY/AGENT INFORMATION:
      NAME: Kubovcik, Ronald J.
      NAME: Lydon, James C.
      REGISTRATION NUMBER: 25,401
      REGISTRATION NUMBER: 30,082
      REFERENCE/DOCKET NUMBER: LAIN-001
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202) 467-6300
      TELEFAX: (202) 466-2006
  INFORMATION FOR SEQ ID NO: 34:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: Amino acid
      TOPOLOGY: Linear
    MOLECULE TYPE: Peptide
    HYPOTHETICAL: No
    FRAGMENT TYPE: N-terminal
US-08-290-301-34
 Query Match
                         27.3%; Score 3; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                               0; Gaps
 Matches
          3; Conservative 0; Mismatches 0; Indels
           2 TNK 4
Qу
             111
Db
          9 TNK 11
```

```
RESULT 57
US-08-381-984-32
; Sequence 32, Application US/08381984
; Patent No. 5804555
  GENERAL INFORMATION:
    APPLICANT: Mamoru TOMITA et al.
    TITLE OF INVENTION: ANTIOXIDANT
    NUMBER OF SEQUENCES: 32
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Wenderoth, Lind & Ponack
      STREET: 805 Fifteenth Street, N.W., #700
      CITY: Washington
      STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
      COMPUTER: IBM Compatible
     OPERATING SYSTEM: MS-DOS
     SOFTWARE: Wordperfect 5.1
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/381,984
;
      FILING DATE: April 11, 1995
;
      CLASSIFICATION: 252
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME: Warren M. Cheek, Jr.
      REGISTRATION NUMBER: 33,367
      REFERENCE/DOCKET NUMBER:
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-371-8850
      TELEFAX:
      TELEX:
   INFORMATION FOR SEQ ID NO: 32:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
   MOLECULE TYPE: peptide
    FEATURE:
      NAME/KEY:
       LOCATION:
       IDENTIFICATION METHOD:
       OTHER INFORMATION: /note= "the specified peptide as well as
       OTHER INFORMATION: peptides including the specified peptide as a
fragment thereof"
    FEATURE:
      NAME/KEY:
       LOCATION:
       IDENTIFICATION METHOD:
       OTHER INFORMATION: /note= "cysteine residues at position 10
      OTHER INFORMATION: is linked by disulfide linkage with the cysteine
residue at pos
       OTHER INFORMATION: SEQ ID No. 5804555 29"
```

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27.3%; Score 3; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                               0; Indels 0; Gaps
                                                                         0;
           3; Conservative 0; Mismatches
 Matches
           7 GRR 9
Qу
             1 GRR 3
Db
RESULT 58
US-08-669-721-17
; Sequence 17, Application US/08669721
; Patent No. 5834236
  GENERAL INFORMATION:
    APPLICANT: Lamb et al., Christopher J.
    TITLE OF INVENTION: NOVEL TRANSCRIPTION ENHANCER ELEMENT AND
    TITLE OF INVENTION: TRANSCRIPTION FACTOR AND METHODS OF USE THEREFOR
    NUMBER OF SEQUENCES: 22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson P.C.
      STREET: 4225 Executive Square, Suite 1400
;
      CITY: La Jolla
      STATE: CA
      COUNTRY: USA
      ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/669,721
       FILING DATE: 27-JUN-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Ellison, Eldora L.
       REGISTRATION NUMBER: 39,967
       REFERENCE/DOCKET NUMBER: 07251/014001
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 619/678-5070
       TELEFAX: 619/678-5099
   INFORMATION FOR SEQ ID NO: 17:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: not relevant
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-669-721-17
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
  Matches
          8 RRP 10
Qу
```

```
RESULT 59
US-08-669-721-18
; Sequence 18, Application US/08669721
; Patent No. 5834236
  GENERAL INFORMATION:
    APPLICANT: Lamb et al., Christopher J.
    TITLE OF INVENTION: NOVEL TRANSCRIPTION ENHANCER ELEMENT AND
    TITLE OF INVENTION: TRANSCRIPTION FACTOR AND METHODS OF USE THEREFOR
    NUMBER OF SEQUENCES: 22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson P.C.
      STREET: 4225 Executive Square, Suite 1400
      CITY: La Jolla
      STATE: CA
     COUNTRY: USA
     ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/669,721
      FILING DATE: 27-JUN-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Ellison, Eldora L.
      REGISTRATION NUMBER: 39,967
      REFERENCE/DOCKET NUMBER: 07251/014001
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: 619/678-5070
       TELEFAX: 619/678-5099
   INFORMATION FOR SEQ ID NO: 18:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS: not relevant
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-669-721-18
  Query Match
                         27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                                0; Gaps
                                                                            0;
                              0; Mismatches 0; Indels
  Matches
           3; Conservative
           8 RRP 10
Qу
              \mathbf{I}
            4 RRP 6
Db
RESULT 60
US-08-669-721-19
; Sequence 19, Application US/08669721
```

```
: Patent No. 5834236
  GENERAL INFORMATION:
    APPLICANT: Lamb et al., Christopher J.
    TITLE OF INVENTION: NOVEL TRANSCRIPTION ENHANCER ELEMENT AND
    TITLE OF INVENTION: TRANSCRIPTION FACTOR AND METHODS OF USE THEREFOR
    NUMBER OF SEQUENCES: 22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson P.C.
      STREET: 4225 Executive Square, Suite 1400
      CITY: La Jolla
      STATE: CA
      COUNTRY: USA
     ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/669,721
      FILING DATE: 27-JUN-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Ellison, Eldora L.
      REGISTRATION NUMBER: 39,967
      REFERENCE/DOCKET NUMBER: 07251/014001
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 619/678-5070
      TELEFAX: 619/678-5099
  INFORMATION FOR SEQ ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: not relevant
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-669-721-19
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                           0:
           7 GRR 9
Qу
             111
Db
           4 GRR 6
RESULT 61
US-08-669-721-20
; Sequence 20, Application US/08669721
; Patent No. 5834236
  GENERAL INFORMATION:
    APPLICANT: Lamb et al., Christopher J.
    TITLE OF INVENTION: NOVEL TRANSCRIPTION ENHANCER ELEMENT AND
    TITLE OF INVENTION: TRANSCRIPTION FACTOR AND METHODS OF USE THEREFOR
    NUMBER OF SEQUENCES: 22
    CORRESPONDENCE ADDRESS:
```

```
ADDRESSEE: Fish & Richardson P.C.
      STREET: 4225 Executive Square, Suite 1400
      CITY: La Jolla
      STATE: CA
     COUNTRY: USA
      ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/669,721
      FILING DATE: 27-JUN-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
    NAME: Ellison, Eldora L.
      REGISTRATION NUMBER: 39,967
      REFERENCE/DOCKET NUMBER: 07251/014001
   TELECOMMUNICATION INFORMATION:
      TELEPHONE: 619/678-5070
      TELEFAX: 619/678-5099
  INFORMATION FOR SEQ ID NO: 20:
    SEOUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: not relevant
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-669-721-20
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
 Matches
           7 GRR 9
Qу
             -111
Db
           4 GRR 6
RESULT 62
US-08-508-664-13
; Sequence 13, Application US/08508664
; Patent No. 5840542
  GENERAL INFORMATION:
    APPLICANT: KANG, Yup
    APPLICANT: YOON, Ji-Won
    TITLE OF INVENTION: METHOD FOR MANUFACTURE OF PROINSULIN
    TITLE OF INVENTION: WITH HIGH EXPORT YIELD
    NUMBER OF SEQUENCES: 25
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Darby & Darby PC
      STREET: 805 Third Avenue
     CITY: New York
      STATE: New York
      COUNTRY: US
      ZIP: 10022
```

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COMPUTER READABLE FORM:
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      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/508,664
      FILING DATE:
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
      NAME: Ludwig, S. Peter
      REGISTRATION NUMBER: 25,351
      REFERENCE/DOCKET NUMBER: 0136/0B300
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-527-7700
      TELEFAX: 212-753-6237
      TELEX: 236687
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
;
      STRANDEDNESS: not relevant
      TOPOLOGY: not relevant
;
    MOLECULE TYPE: peptide
    ORIGINAL SOURCE:
      ORGANISM: Homo sapiens
    IMMEDIATE SOURCE:
      CLONE: CONN PEPTIDE
US-08-508-664-13
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                                            0;
 Matches
          3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                               0; Gaps
           5 KTG 7
Qу
             \perp
Db
           6 KTG 8
RESULT 63
US-08-701-124-19
; Sequence 19, Application US/08701124
; Patent No. 5846782
; GENERAL INFORMATION:
    APPLICANT: Wickham, Thomas J.
     APPLICANT: Roelvink, Petrus W.
     APPLICANT: Kovesdi, Imre
     TITLE OF INVENTION: TARGETING ADENOVIRUS WITH USE OF
     TITLE OF INVENTION: CONSTRAINED PEPTIDE MOTIFS
     NUMBER OF SEQUENCES: 80
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Leydig, Voit & Mayer, Ltd.
      STREET: Two Prudential Plaza - 49th Floor
      CITY: Chicago
      STATE: Illinois
      COUNTRY: USA
      ZIP: 60601
```

```
COMPUTER READABLE FORM:
;
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/701,124
       FILING DATE: 21-AUG-1996
   INFORMATION FOR SEQ ID NO: 19:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
US-08-701-124-19
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
  Matches
            4 KKT 6
Qv
             -1.11
Db
           8 KKT 10
RESULT 64
US-08-473-025-12
; Sequence 12, Application US/08473025
; Patent No. 5851994
   GENERAL INFORMATION:
     APPLICANT: Schreiber, Ronda
     APPLICANT: Polarek, James
     TITLE OF INVENTION: Compositions that Inhibit Wound
     TITLE OF INVENTION: Contraction and Methods of Using Same
     NUMBER OF SEQUENCES: 18
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: Campbell and Flores
       STREET: 4370 La Jolla Village Drive, Suite 700
       CITY: San Diego
       STATE: California
       COUNTRY: USA
       ZIP: 92122
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/473,025
       FILING DATE: 06-JUN-1995
       CLASSIFICATION: 514
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/234,979
       FILING DATE: 28-APR-1994
     ATTORNEY/AGENT INFORMATION:
       NAME: Campbell, Cathryn A.
       REGISTRATION NUMBER: 31,815
```

```
REFERENCE/DOCKET NUMBER: P-LA 1597
;
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 12:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
US-08-473-025-12
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                               0; Gaps
                                                                           0;
 Matches
           7 GRR 9
Qу
             1 GRR 3
Db
RESULT 65
US-08-502-046-2
; Sequence 2, Application US/08502046
; Patent No. 5861487
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION: HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/502,046
      FILING DATE: 14-JUL-1995
      CLASSIFICATION: 800
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/285,309
      FILING DATE: 03-AUG-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
      REFERENCE/DOCKET NUMBER: 8633Z
    TELECOMMUNICATION INFORMATION:
```

```
TELEPHONE: (516) 742-4343
;
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 2:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-502-046-2
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
 Matches
           7 GRR 9
Qу
             111
           5 GRR 7
Db
RESULT 66
US-08-502-046-13
; Sequence 13, Application US/08502046
; Patent No. 5861487
  GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION: HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
       STREET: 400 Garden City Plaza
      CITY: Garden City
       STATE: New York
      COUNTRY: U.S.A.
       ZIP: 11530
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/502,046
       FILING DATE: 14-JUL-1995
       CLASSIFICATION: 800
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/285,309
       FILING DATE: 03-AUG-1994
     ATTORNEY/AGENT INFORMATION:
       NAME: DiGiglio, Frank S.
       REGISTRATION NUMBER: 31,346
       REFERENCE/DOCKET NUMBER: 8633Z
```

```
TELECOMMUNICATION INFORMATION:
;
      TELEPHONE: (516) 742-4343
;
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 13:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-502-046-13
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches 3; Conservative
                             0; Mismatches 0; Indels 0; Gaps 0;
          7 GRR 9
Qу
             | \cdot |
          5 GRR 7
Db
RESULT 67
US-08-502-046-15
; Sequence 15, Application US/08502046
; Patent No. 5861487
; GENERAL INFORMATION:
    APPLICANT: Holton, Timothy A.
    APPLICANT: Cornish, Edwina C.
    APPLICANT: Kovacic, Filippa
    APPLICANT: Tanaka, Yoshikazu
    APPLICANT: Lester, Diane R.
    TITLE OF INVENTION: GENETIC SEQUENCES ENCODING A 3,5'-
    TITLE OF INVENTION: HYDROXYLASE AND USES
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Scully, Scott, Murphy & Presser
      STREET: 400 Garden City Plaza
      CITY: Garden City
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 11530
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/502,046
      FILING DATE: 14-JUL-1995
      CLASSIFICATION: 800
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/285,309
      FILING DATE: 03-AUG-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: DiGiglio, Frank S.
      REGISTRATION NUMBER: 31,346
```

```
REFERENCE/DOCKET NUMBER: 8633Z
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (516) 742-4343
      TELEFAX: (516) 742-4366
      TELEX: 230 901 SANS UR
  INFORMATION FOR SEQ ID NO: 15:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
US-08-502-046-15
 Query Match
                         27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                           0;
          7 GRR 9
Qу
             111
          5 GRR 7
Db
RESULT 68
US-08-633-148-6
; Sequence 6, Application US/08633148
; Patent No. 5864018
  GENERAL INFORMATION:
    APPLICANT: MORSER, MICHAEL J.
    APPLICANT: NAGASHIMA, MARIKO
    APPLICANT: HOLLANDER, DORIS A.
    TITLE OF INVENTION: ANTIBODIES TO ADVANCED GLYCOSYLATION
    TITLE OF INVENTION: END-PRODUCT RECEPTOR POLYPEPTIDES AND USES THEREFOR
    NUMBER OF SEQUENCES: 23
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP
      STREET: TWO EMBARCADERO CENTER, 8TH FLOOR
      CITY: SAN FRANCISCO
      STATE: CALIFORNIA
      COUNTRY: U.S.A.
      ZIP: 94111
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/633,148
      FILING DATE: 16-APR-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: MURPHY ESQ., MATTHEW B.
      REGISTRATION NUMBER: 39,787
      REFERENCE/DOCKET NUMBER: 014618-005600US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415) 326-2400
      TELEFAX: (415) 326-2422
```

```
INFORMATION FOR SEQ ID NO: 6:
     SEQUENCE CHARACTERISTICS:
;
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-633-148-6
  Query Match
                          27.3%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
 Matches
            6 TGR 8
Qу
              | | |
            5 TGR 7
Db
RESULT 69
US-08-397-286-4
; Sequence 4, Application US/08397286
; Patent No. 5871747
  GENERAL INFORMATION:
     APPLICANT: GENGOUX, CHRISTINE; LeCLERC, CLAUDE
     TITLE OF INVENTION: ANTIGEN-CARRYING
;
    TITLE OF INVENTION: MICROPARTICLES AND THEIR USE IN THE IN THE TITLE OF INVENTION: INDUCTION OF HUMORAL OR CELLULAR RESPONSES
;
     NUMBER OF SEQUENCES: 5
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: BIERMAN & MUSERLIAN
       STREET: 600 THIRD AVENUE
      CITY: NEW YORK
      STATE: NEW YORK
       COUNTRY: U.S.A.
      ZIP: 10016
     COMPUTER READABLE FORM:
      MEDIUM TYPE: FLOPPY DISK
       COMPUTER: IBM PC COMPATIBLE
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: ASC II
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/397,286
       FILING DATE: 10-MAR-1995
       CLASSIFICATION: 424
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: PCT/FR93/00876
       FILING DATE: 13-SEP-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: FR/92/10879
       FILING DATE: 11-SEP-1992
     ATTORNEY/AGENT INFORMATION:
       NAME: CHARLES A. MUSERLIAN
       REGISTRATION NUMBER: 19,683
       REFERENCE/DOCKET NUMBER: 102.162
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-661-8000
       TELEFAX: 212-661-8002
```

```
INFORMATION FOR SEQ ID NO: 4:
    SEOUENCE CHARACTERISTICS:
;
      LENGTH: 11
;
      TYPE: AMINO ACID
      STRANDEDNESS: UNKNOWN
      TOPOLOGY: UNKNOWN
    MOLECULE TYPE: PEPTIDE
US-08-397-286-4
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
                         100.0%; Pred. No. 3.1e+03;
 Best Local Similarity
           3; Conservative
                               0; Mismatches
                                                  0;
                                                     Indels
                                                                0; Gaps
                                                                            0;
 Matches
           2 TNK 4
Qу
             +++
           7 TNK 9
Db
RESULT 70
US-08-428-257A-54
; Sequence 54, Application US/08428257A
; Patent No. 5885808
  GENERAL INFORMATION:
     APPLICANT: Spooner, Robert A.
     APPLICANT: Epenetos, A.A.
     TITLE OF INVENTION: Compounds to target cells
    NUMBER OF SEQUENCES: 80
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Jules E. Goldberg
       STREET: 261 Madison Avenue
      CITY: New York
       STATE: NY
      COUNTRY: USA
       ZIP: 10016-2391
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/428,257A
       FILING DATE: 07/05/95
       CLASSIFICATION: 514
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: protein
US-08-428-257A-54
                          27.3%; Score 3; DB 2; Length 11;
  Query Match
                         100.0%; Pred. No. 3.1e+03;
  Best Local Similarity
                                                                            0;
                                0; Mismatches
                                                  0; Indels
                                                                0; Gaps
            3; Conservative
            4 KKT 6
Qу
```

| KKT 6

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RESULT 71
US-08-934-222-77
; Sequence 77, Application US/08934222
; Patent No. 5928896
  GENERAL INFORMATION:
    APPLICANT: EVANS, Herbert J.
    APPLICANT: KINI, R. Manjunatha
    TITLE OF INVENTION: Polypeptides That Include Conformation-
    TITLE OF INVENTION: Constraining Groups Which Flank A Protein-Protein
Interaction
    TITLE OF INVENTION: Site
    NUMBER OF SEQUENCES: 153
;
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Foley & Lardner
      STREET: Suite 500, 3000 K Street NW
      CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20007
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/934,222
      FILING DATE: 19-SEPT-1997
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/532,818
       FILING DATE: 03-MAY-1996
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/143,364
       FILING DATE: 29-OCT-1993
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/051,741
       FILING DATE: 23-APR-1993
     ATTORNEY/AGENT INFORMATION:
      NAME: Isacson, John P.
       REGISTRATION NUMBER: 33,751
       REFERENCE/DOCKET NUMBER: 040433/0148
   INFORMATION FOR SEQ ID NO: 77:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
US-08-934-222-77
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
  Matches
            8 RRP 10
Qу
              111
Db
            3 RRP 5
```

```
RESULT 72
US-08-395-204-4
; Sequence 4, Application US/08395204
: Patent No. 5935580
  GENERAL INFORMATION:
    APPLICANT: Ladant, Daniel
    APPLICANT: Leclerc, Claude
    APPLICANT: Sebo, Peter
    APPLICANT: Ullmann, Agnes
    TITLE OF INVENTION: Recombinant Mutants for Inducing
    TITLE OF INVENTION: Specific Immune Responses
    NUMBER OF SEQUENCES: 5
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
      ADDRESSEE: Dunner
      STREET: 1300 I Street, N.W.
      CITY: Washington
      STATE: D.C.
     COUNTRY: USA
     ZIP: 20005-3315
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
;
      COMPUTER: IBM PC compatible
;
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/395,204
      FILING DATE:
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/871,795
      FILING DATE: 21-APR-1992
    ATTORNEY/AGENT INFORMATION:
      NAME: Meyers, Kenneth J.
      REGISTRATION NUMBER: 25,146
      REFERENCE/DOCKET NUMBER: 03495-0109-00000
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-408-4000
      TELEFAX: 202-408-4400
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-395-204-4
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
 Matches
           2 TNK 4
Qу
             III
           7 TNK 9
Db
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```
RESULT 73
US-08-933-402-77
; Sequence 77, Application US/08933402
; Patent No. 5948887
  GENERAL INFORMATION:
    APPLICANT: EVANS, Herbert J.
    APPLICANT: KINI, R. Manjunatha
    TITLE OF INVENTION: Polypeptides That Include Conformation-
    TITLE OF INVENTION: Constraining Groups Which Flank A Protein-Protein
Interaction
    TITLE OF INVENTION: Site
    NUMBER OF SEQUENCES: 153
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Foley & Lardner
      STREET: Suite 500, 3000 K Street NW
      CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20007
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
;
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/933,402
      FILING DATE: 19-SEPT-1997
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/532,818
      FILING DATE: 03-MAY-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/143,364
      FILING DATE: 29-OCT-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/051,741
      FILING DATE: 23-APR-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Isacson, John P.
      REGISTRATION NUMBER: 33,751
      REFERENCE/DOCKET NUMBER: 040433/0148
  INFORMATION FOR SEQ ID NO: 77:
     SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
US-08-933-402-77
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
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                                                                            0;
                              0; Mismatches 0; Indels
            3; Conservative
           8 RRP 10
Qy
             \perp
Db
           3 RRP 5
```

```
RESULT 74
US-09-207-621-77
; Sequence 77, Application US/09207621
; Patent No. 5952465
  GENERAL INFORMATION:
    APPLICANT: EVANS, Herbert J.
    APPLICANT: KINI, R. Manjunatha
    TITLE OF INVENTION: Polypeptides That Include Conformation-
    TITLE OF INVENTION: Constraining Groups Which Flank A Proten-Protein
Interaction Sit
    NUMBER OF SEQUENCES:
                          153
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Foley & Lardner
      STREET: Suite 500, 3000 K Street NW
      CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20007
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/207,621
      FILING DATE:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/532,818
      FILING DATE: 03-MAY-1996
      APPLICATION NUMBER: PCT/US94/04294
      FILING DATE:
                    21-APR-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/143,364
      FILING DATE: 29-OCT-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.S. 08/051,741
      FILING DATE:
                    23-APR-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Isacson, John P.
      REGISTRATION NUMBER: 33,751
      REFERENCE/DOCKET NUMBER: 040433/0148
                             77:
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
US-09-207-621-77
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                               0; Gaps
                                                                            0;
           3; Conservative 0; Mismatches 0; Indels
  Matches
           8 RRP 10
Qу
             3 RRP 5
Db
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```
RESULT 75
US-08-645-193B-55
; Sequence 55, Application US/08645193B
; Patent No. 5962253
  GENERAL INFORMATION:
    APPLICANT: Kupke, Thomas
    APPLICANT: Gotz, Friedrich
    APPLICANT: Kempter, Christoph
    APPLICANT: Jung, Gunther
    TITLE OF INVENTION: Oxidative Decarboxylation of Peptides
    TITLE OF INVENTION: Catalyzed by Flavoprotein EpiD
    NUMBER OF SEQUENCES: 70
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C.
      STREET: 1100 New York Avenue, Suite 600
      CITY: Washington
      STATE: D.C.
      COUNTRY: U.S.A.
      ZIP: 20005
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/645,193B
      FILING DATE: 13-MAY-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Esmond, Robert W.
      REGISTRATION NUMBER: 32,893
      REFERENCE/DOCKET NUMBER: 0652.1540000
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202) 371-2600
      TELEFAX: (202) 371-2540
  INFORMATION FOR SEQ ID NO: 55:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: not relevant
    MOLECULE TYPE: peptide
US-08-645-193B-55
                         27.3%; Score 3; DB 2; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
                                                                0; Gaps
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           5 KTG 7
Qу
             2 KTG 4
Db
Search completed: April 8, 2004, 15:52:09
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Job time: 12.3077 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 8, 2004, 15:30:07; Search time 8.61538 Seconds

(without alignments)

122.816 Million cell updates/sec

Title: US-09-787-443A-9

Perfect score: 11

Sequence: 1 ATNKKTGRRPR 11

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 283366 seqs, 96191526 residues

Word size: 0

Total number of hits satisfying chosen parameters: 226

Minimum DB seq length: 11 Maximum DB seq length: 11

Post-processing: Listing first 100 summaries

Database: PIR\_78:\*

1: pir1:\* 2: pir2:\*

3: pir3:\*

4: pir4:\*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

			も				
Re	esult		Query				
	No.	Score	Match	Length	DB	ID	Description
-	1	3	27.3	11	2	JN0023	substance P - chic
	2	3	27.3	11	2	PD0441	translation elonga
	3	3	27.3	11	4	154081	retinoic acid rece
	4	2	18.2	11	1	XAVIBH	bradykinin-potenti
	5	2	18.2	11	1	XASNBA	bradykinin-potenti
	6	2	18.2	11	1	SPHO	substance P - hors
	7	2	18.2	11	1	A60654	substance P - guin
	8	2	18.2	11	2	S32575	ribosomal protein
	9	2	18.2	11	2	PQ0682	photosystem I 17.5
	10	2	18.2	11	2	A26930	ermG leader peptid
	11	2	18.2	11	2	A61365	phyllokinin - Rohd
	12	2	18.2	11	2	B26744	megascoliakinin -
	13	2	18.2	11	2	S23308	substance P - rain

14	2	18.2	11	2	S23306	substance P - Atla
15	2	18.2	11	2	S07201	physalaemin – frog
16	2	18.2	11	2	S42449	ant1 protein - pha
17	2	18.2	11	2	A58502	38K kidney stone p
18	2	18.2	11	2	JQ0395	hypothetical prote
	2	18.2	11	2	S66606	quinoline 2-oxidor
19						<del>-</del>
20	2	18.2	11	2	I41138	acetyl ornithine d
21	2	18.2	11	2	S42587	celF protein - Esc
22	2	18.2	11	2	S33782	acetolactate synth
23	2	18.2	11	2	B41835	translation elonga
24	2	18.2	11	2	S14087	parasporal crystal
25	2	18.2	11	2	A44755	20alpha-hydroxyste
26	2	18.2	11	2	E41476	probable antigen 5
27	2	18.2	11	2	S33519	probable secreted
28	2	18.2	11	2	S19775	wound-induced prot
29	2	18.2	11	2	PC4267	ribosomal protein
30	2	18.2	11	2	PQ0731	unidentified 5.7/3
			11	2	PC2173	triacylglycerol li
31	2	18.2				
32	2	18.2	11	2	S78026	ribosomal protein
33	2	18.2	11	2	A34135	DNA-binding protei
34	2	18.2	11	2	A61512	variant surface gl
35	2	18.2	11	2	A26120	6-phosphofructokin
36	2	18.2	11	2	A34662	Achatina cardio-ex
37	2	18.2	11	2	S05002	corazonin - Americ
38	2	18.2	11	2	S33300	probable substance
39	2	18.2	11	2	C37196	bradykinin-potenti
40	2	18.2	11	2	D37196	bradykinin-potenti
41	2	18.2	11	2	D57789	gallbladder stone
42	2	18.2	11	2	PT0250	Ig heavy chain CRD
	2	18.2	11	2	PT0273	Ig heavy chain CRD
43	2		11	2	PT0273	Ig heavy chain CRD
44		18.2				
45	2	18.2	11	2	PT0302	Ig heavy chain CRD
46	2	18.2	11	2	S13279	Ile-Ser-bradykinin
47	2	18.2	11	2	I54193	Rhesus blood group
48	2	18.2	11	2	S51732	T-cell receptor al
49	2	18.2	11	2	S23926	major glycoprotein
50	2	18.2	11	2	S54347	tubulin beta chain
51	2	18.2	11	2	A14454	6-phosphofructokin
52	2	18.2	11	2	B29806	acidic proline-ric
53	2	18.2	11	2	A29806	acidic proline-ric
54	2	18.2	11	2	PH1632	Ig H chain V-D-J r
55	2	18.2	11	2	PH1376	T antigen variant
56	2	18.2	11	2	PT0211	T-cell receptor al
57	2	18.2	11	2	C38887	T-cell receptor ga
	2	18.2	11	2	S45386	low density lipopr
58						microtubule-associ
59	2	18.2	11	2	S09349	
60	2	18.2	11	2	PH0929	T-cell receptor be
61	2	18.2	11	2	PH0938	T-cell receptor be
62	2	18.2	11	2	PH0947	T-cell receptor be
63	2	18.2	11	2	PH0919	T-cell receptor be
64	2	18.2	11	2	I52304	gene rSSTR4 protei
65	2	18.2	11	2	A48973	glucoamylase A1 (E
66	2	18.2	11	2	PN0169	NADH2 dehydrogenas
67	2	18.2	11	4	S52252	hypothetical prote
68	2	18.2	11	4	S19015	hypothetical prote
69	1	9.1	11	1	ECLQ2M	tachykinin II - mi
	1	9.1	11	1	EOOCC	eledoisin - curled
70	T	9.1	тт	1	10000	CICACIDIN CALLEA

71	1	9.1	11	1	EOOC	eledoisin - musky
72	1	9.1	11	1	GMROL	leucosulfakinin -
73	1	9.1	11	1	LFTWWE	probable trpEG lea
74	1	9.1	11	2	s66196	alcohol dehydrogen
75	1	9.1	11	2	G42762	proteasome endopep
76	1	9.1	11	2	s68392	H+-transporting tw
77	1	9.1	11	2	A33917	dihydroorotase (EC
78	1	9.1	11	2	B49164	chromogranin-B - r
79	1	9.1	11	2	A40693	transgelin - sheep
80	1	9.1	11	2	A38841	rhodopsin homolog
81	1	9.1	11	2	S00616	parasporal crystal
82	1	9.1	11	2	C53652	rhlR protein - Pse
83	1	9.1	11	2	S09074	cytochrome P450-4b
84	1	9.1	11	2	A57458	gene Gax protein -
85	1	9.1	11	2	D60409	kassinin-like pept
86	1	9.1	11	2	F60409	substance P-like p
87	1	9.1	11	2	E60409	substance P-like p
88	1	9.1	11	2	YHRT	morphogenetic neur
89	1	9.1	11	2	YHHU	morphogenetic neur
90	1	9.1	11	2	YHBO	morphogenetic neur
91	1	9.1	11	2	YHXAE	morphogenetic neur
92	1	9.1	11	2	YHJFHY	morphogenetic neur
93	1	9.1	11	2	B60409	kassinin-like pept
94	1	9.1	11	2	C60409	kassinin-like pept
95	1	9.1	11	2	s07203	uperolein – frog (
96	1	9.1	11	2	S07207.	Crinia-angiotensin
97	1	9.1	11	2	A61033	ranatachykinin A -
98	1	9.1	11	2	D61033	ranatachykinin D -
99	1	9.1	11	2	B58501	24K kidney and bla
100	1	9.1	11	2	D58502	27K bile and gallb

## ALIGNMENTS

```
RESULT 1
JN0023
substance P - chicken
C; Species: Gallus gallus (chicken)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 11-Jul-1997
C; Accession: JN0023
R; Conlon, J.M.; Katsoulis, S.; Schmidt, W.E.; Thim, L.
Regul. Pept. 20, 171-180, 1988
A; Title: [Arg3] substance P and neurokinin A from chicken small intestine.
A; Reference number: JN0023; MUID: 88204263; PMID: 2452461
A; Accession: JN0023
A; Molecule type: protein
A; Residues: 1-11 <CON>
C; Superfamily: substance P precursor
C; Keywords: amidated carboxyl end; tachykinin
F;11/Modified site: amidated carboxyl end (Met) #status predicted
                         27.3%; Score 3; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.3e+03;
                                                                0; Gaps 0;
           3; Conservative 0; Mismatches 0; Indels
  Matches
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9 RPR 11

Qу

```
RESULT 2
PD0441
translation elongation factor TU-like protein P43, mitochondrial - mouse
(fragment)
C; Species: Mus musculus (house mouse)
C;Date: 21-Aug-1998 #sequence revision 21-Aug-1998 #text change 21-Aug-1998
C; Accession: PD0441
R; Kawakami, T.; Uchida, T.; Sakai, T.; Kamo, M.; Morimasa, T.; Tsuqita, A.
submitted to JIPID, August 1998
A; Description: Proteome analysis of mouse brain.
A; Reference number: PD0441
A; Accession: PD0441
A; Molecule type: protein
A; Residues: 1-11 <KAW>
A; Experimental source: striatum
C; Keywords: mitochondrion
 Query Match
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  Best Local Similarity
                          100.0%; Pred. No. 3.3e+03;
                                                                  0; Gaps
                                                                               0;
            3; Conservative
                                 0; Mismatches
                                                    0; Indels
            4 KKT 6
Qy
              111
            5 KKT 7
Db
RESULT 3
I54081
retinoic acid receptor alpha, exon 3 (mistranslated) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 04-Jun-1999 #sequence revision 04-Jun-1999 #text change 28-Jun-1999
C; Accession: I54081
R; Dong, S.; Geng, J.P.; Tong, J.H.; Wu, Y.; Cai, J.R.; Sun, G.L.; Chen, S.R.;
Wang, Z.Y.; Larsen, C.J.; Berger, R.
Genes Chromosomes Cancer 6, 133-139, 1993
A; Title: Breakpoint clusters of the PML gene in acute promyelocytic leukemia:
primary structure of the reciprocal products of the PML-RARA gene in a patient
with t(15;17).
A; Reference number: I54081; MUID: 93222087; PMID: 7682097
A; Accession: I54081
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-11 <DON>
A;Cross-references: GB:S57794; NID:g299073; PIDN:AAD13888.1; PID:g4261588
A; Note: the translation is from an incorrect reading frame
C; Genetics:
A; Gene: GDB: RARA
A; Cross-references: GDB:120337; OMIM:180240
A; Map position: 17q12-17q12
                          27.3%; Score 3; DB 4; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.3e+03;
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3; Conservative 0; Mismatches

Matches

0; Indels

0; Gaps

0;

```
9 RPR 11
ΟV
              III
            3 RPR 5
Db
RESULT 4
XAVIBH
bradykinin-potentiating peptide - halys viper
N; Alternate names: BPP
C; Species: Agkistrodon halys (halys viper)
C;Date: 30-Sep-1988 #sequence revision 30-Sep-1988 #text change 05-Aug-1994
C; Accession: JC0002
R;Chi, C.W.; Wang, S.Z.; Xu, L.G.; Wang, M.Y.; Lo, S.S.; Huang, W.D.
Peptides 6, 339-342, 1985
A; Title: Structure-function studies on the bradykinin potentiating peptide from
Chinese snake venom (Agkistrodon halys Pallas).
A; Reference number: JC0002; MUID: 86177022; PMID: 3008123
A; Accession: JC0002
A; Molecule type: protein
A; Residues: 1-11 <CHI>
C; Comment: Because this peptide both inhibits the activity of the angiotensin-
converting enzyme and enhances the action of bradykinin, it is an
antihypertensive agent.
C; Superfamily: bradykinin-potentiating peptide
C; Keywords: angiotensin-converting enzyme inhibitor; antihypertensive;
bradykinin; pyroglutamic acid; venom
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            7 GR 8
Qy
              11
            2 GR 3
Db
RESULT 5
bradykinin-potentiating peptide B - mamushi
C; Species: Agkistrodon blomhoffi (mamushi)
C;Date: 13-Jul-1981 #sequence_revision 13-Jul-1981 #text change 08-Dec-1995
C; Accession: A01254
R; Kato, H.; Suzuki, T.
Proc. Jpn. Acad. 46, 176-181, 1970
A; Reference number: A01254
A; Accession: A01254
A; Molecule type: protein
A; Residues: 1-11 <KAT>
A; Note: the sequence of the natural peptide was confirmed by the synthesis and
analysis of a peptide having the identical structure and biological properties
C; Superfamily: bradykinin-potentiating peptide
C; Keywords: angiotensin-converting enzyme inhibitor; bradykinin; pyroglutamic
```

F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental

acid; venom

```
18.2%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
          2; Conservative
                              0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
          10 PR 11
Qу
           5 PR 6
Db
RESULT 6
SPHO
substance P - horse
C; Species: Equus caballus (domestic horse)
C;Date: 23-Oct-1981 #sequence revision 23-Oct-1981 #text change 23-Aug-1996
C; Accession: A01558
R; Studer, R.O.; Trzeciak, A.; Lergier, W.
Helv. Chim. Acta 56, 860-866, 1973
A; Title: Isolierung und Aminosaeuresequenz von Substanz P aus Pferdedarm.
A; Reference number: A01558
A; Accession: A01558
A; Molecule type: protein
A; Residues: 1-11 <STU>
C; Superfamily: substance P precursor
C; Keywords: amidated carboxyl end; hormone
F;11/Modified site: amidated carboxyl end (Met) #status experimental
                          18.2%; Score 2; DB 1; Length 11;
 Query Match
                         100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                                             0;
            2; Conservative 0; Mismatches
                                                 0; Indels 0; Gaps
 Matches
           9 RP 10
Qу
             11
Db
           1 RP 2
RESULT 7
A60654
substance P - guinea pig
C; Species: Cavia porcellus (guinea pig)
C;Date: 14-May-1993 #sequence revision 27-Jun-1994 #text change 08-Dec-1995
C; Accession: A60654
R; Murphy, R.
Neuropeptides 14, 105-110, 1989
A; Title: Primary amino acid sequence of quinea-piq substance P.
A; Reference number: A60654; MUID: 90044685; PMID: 2478925
A; Accession: A60654
A; Molecule type: protein
A; Residues: 1-11 <MUR>
C; Superfamily: substance P precursor
C; Keywords: amidated carboxyl end; neuropeptide; tachykinin
F:11/Modified site: amidated carboxyl end (Met) #status experimental
 Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                         100.0%; Pred. No. 3.4e+04;
 Matches
          2; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                             0;
```

9 RP 10

Qу

```
||
1 RP 2
```

1 AT 2

Qу

Db

```
RESULT 8
S32575
ribosomal protein S2, plastid - squawroot plastid (fragment)
C; Species: plastid Conopholis americana (squawroot)
C; Date: 19-Mar-1997 #sequence revision 25-Apr-1997 #text change 13-Aug-1999
C; Accession: S32575
R; Taylor, G.W.; Wolfe, K.H.; Morden, C.W.; dePamphilis, C.W.; Palmer, J.D.
Curr. Genet. 20, 515-518, 1991
A; Title: Lack of a functional plastid tRNA(Cys) gene is associated with loss of
photosynthesis in a lineage of parasitic plants.
A; Reference number: $32575; MUID:92145776; PMID:1723664
A; Accession: S32575
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-11 <TAY>
A; Cross-references: EMBL: X64567; NID: g11275; PIDN: CAA45868.1; PID: g11276
C; Genetics:
A; Gene: rps2
A; Genome: plastid
C; Superfamily: Escherichia coli ribosomal protein S2
C; Keywords: plastid; protein biosynthesis; ribosome
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
  Matches
                                                                              0;
            2; Conservative
                                0; Mismatches
                                                    0;
                                                      Indels
                                                                  0; Gaps
            8 RR 9
Qy
              11
Db
            3 RR 4
RESULT 9
PO0682
photosystem I 17.5K D2 chain - common tobacco (fragment)
C; Species: Nicotiana tabacum (common tobacco)
C; Date: 19-May-1994 #sequence revision 19-May-1994 #text change 17-Mar-1999
C; Accession: PQ0682
R; Obokata, J.; Mikami, K.; Hayashida, N.; Nakamura, M.; Sugiura, M.
Plant Physiol. 102, 1259-1267, 1993
A; Title: Molecular heterogeneity of photosystem I. psaD, psaE, psaF, psaH and
psaL are all present in isoforms in Nicotiana spp.
A; Reference number: PQ0667; MUID: 94105345; PMID: 8278548
A; Accession: PQ0682
A; Molecule type: protein
A; Residues: 1-11 <OBO>
C; Superfamily: photosystem I chain II
C; Keywords: chloroplast; photosynthesis; photosystem I; thylakoid
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
```

```
RESULT 10
A26930
ermG leader peptide 1 - Bacillus sphaericus
C; Species: Bacillus sphaericus
C;Date: 08-Mar-1989 #sequence revision 08-Mar-1989 #text change 24-Sep-1999
C; Accession: A26930
R; Monod, M.; Mohan, S.; Dubnau, D.
J. Bacteriol. 169, 340-350, 1987
A; Title: Cloning and analysis of ermG, a new macrolide-lincosamide-streptogramin
B resistance element from Bacillus sphaericus.
A; Reference number: A91840; MUID: 87083389; PMID: 3025178
A; Accession: A26930
A; Molecule type: DNA
A; Residues: 1-11 < MON>
A; Cross-references: GB:M15332; NID:g142881; PIDN:AAA22417.1; PID:g142882
C; Superfamily: unassigned leader peptides
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
                               0; Mismatches
  Matches
            2; Conservative
            3 NK 4
Qу
              \perp
            2 NK 3
Db
RESULT 11
A61365
phyllokinin - Rohde's leaf frog
N; Alternate names: bradykinyl-isoleucyl-tyrosine O-sulfate
C; Species: Phyllomedusa rohdei (Rohde's leaf frog)
C;Date: 09-Sep-1994 #sequence revision 09-Sep-1994 #text_change 18-Aug-2000
C; Accession: A61365
R; Anastasi, A.; Bertaccini, G.; Erspamer, V.
Br. J. Pharmacol. 27, 479-485, 1966
A; Title: Pharmacological data on phyllokinin (bradykinyl-isoleucyl-tyrosine O-
sulphate) and bradykinyl-isoleucyl-tyrosine.
A; Reference number: A61365; MUID: 67179312; PMID: 5970899
A; Accession: A61365
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 < ANA>
C; Superfamily: unassigned animal peptides
C; Keywords: sulfoprotein
F;11/Binding site: sulfate (Tyr) (covalent) #status experimental
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                                   0; Gaps
                                                                               0;
            2; Conservative 0; Mismatches
                                                    0; Indels
  Matches
            9 RP 10
Qу
              \perp
Db
            1 RP 2
```

```
RESULT 12
B26744
megascoliakinin - garden dagger wasp
N; Alternate names: 6-Thr-bradykinin-Lys-Ala
C; Species: Megascolia flavifrons (garden dagger wasp)
C;Date: 08-Mar-1989 #sequence revision 08-Mar-1989 #text change 18-Aug-2000
C; Accession: B26744; A28609
R; Yasuhara, T.; Mantel, P.; Nakajima, T.; Piek, T.
Toxicon 25, 527-535, 1987
A; Title: Two kinins isolated from an extract of the venom reservoirs of the
solitary wasp Megascolia flavifrons.
A; Reference number: A94322; MUID: 87293024; PMID: 3617088
A; Accession: B26744
A; Molecule type: protein
A; Residues: 1-11 <YAS>
R; Nakajima, T.; Piek, T.; Yashuara, T.; Mantel, P.
Toxicon 26, 34, 1988
A; Title: Two kinins isolated from the venom of Megascolia flavifrons.
A; Reference number: A28609
A; Accession: A28609
A; Molecule type: protein
A; Residues: 1-11 < NAK>
C; Superfamily: unassigned animal peptides
C; Keywords: bradykinin; presynaptic neurotoxin; venom
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                                  0; Gaps
                                                                               0;
  Matches
                                                    0; Indels
            9 RP 10
Qу
              11
            1 RP 2
Db
RESULT 13
S23308
substance P - rainbow trout
C; Species: Oncorhynchus mykiss (rainbow trout)
C;Date: 19-Mar-1997 #sequence revision 19-Mar-1997 #text change 18-Aug-2000
C; Accession: S23308
R; Jensen, J.; Conlon, J.M.
Eur. J. Biochem. 206, 659-664, 1992
A; Title: Substance-P-related and neurokinin-A-related peptides from the brain of
the cod and trout.
A; Reference number: S23186; MUID: 92298992; PMID: 1376687
A; Accession: S23308
A; Molecule type: protein
A; Residues: 1-11 <JEN>
A; Experimental source: brain
C; Function:
A; Description: may play a physiological role in the regulation of cardiovascular
and gastrointestinal functions
A; Note: substance P is derived by post-translational processing of
preprotachykinin A
C; Superfamily: unassigned animal peptides
```

```
C; Keywords: neuropeptide; amidated carboxyl end; tachykinin
F;11/Modified site: amidated carboxyl end (Met) #status predicted
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
           10 PR 11
Qу
              \mathbf{H}
Db
           2 PR 3
RESULT 14
S23306
substance P - Atlantic cod
C; Species: Gadus morhua (Atlantic cod)
C;Date: 19-Mar-1997 #sequence revision 19-Mar-1997 #text change 18-Aug-2000
C; Accession: S23306
R; Jensen, J.; Conlon, J.M.
Eur. J. Biochem. 206, 659-664, 1992
A; Title: Substance-P-related and neurokinin-A-related peptides from the brain of
the cod and trout.
A; Reference number: S23186; MUID: 92298992; PMID: 1376687
A; Accession: S23306
A; Molecule type: protein
A; Residues: 1-11 <JEN>
A; Experimental source: brain
C; Function:
A; Description: may play a physiological role in the regulation of cardiovascular
and gastrointestinal functions
A; Note: substance P is derived by post-translational processing of
preprotachykinin A
C; Superfamily: unassigned animal peptides
C; Keywords: neuropeptide; amidated carboxyl end; tachykinin
F;11/Modified site: amidated carboxyl end (Met) #status predicted
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative
                               0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
           10 PR 11
Qу
              11
Db
            2 PR 3
RESULT 15
S07201
physalaemin - frog (Physalaemus fuscomaculatus)
C; Species: Physalaemus fuscomaculatus
C;Date: 12-Feb-1993 #sequence_revision 12-Mar-1993 #text change 18-Aug-2000
C; Accession: S07201
R; Erspamer, V.; Anastasi, A.; Bertaccini, G.; Cei, J.M.
Experientia 20, 489-490, 1964
A; Title: Structure and pharmacological actions of physalaemin, the main active
polypeptide of the skin of Physalaemus fuscumaculatus.
A; Reference number: S07201; MUID: 66076612; PMID: 5857249
A; Accession: S07201
```

```
A; Molecule type: protein
A; Residues: 1-11 <ERS>
C: Superfamily: unassigned animal peptides
C; Keywords: amidated carboxyl end; pyroglutamic acid; skin; tachykinin
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F:11/Modified site: amidated carboxyl end (Met) #status experimental
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                                                  0; Gaps
                                                                              0;
  Matches
            2; Conservative
                               0; Mismatches
                                                   0; Indels
            3 NK 4
Qу
              Db
            5 NK 6
RESULT 16
S42449
antl protein - phage P7
C; Species: phage P7
C;Date: 07-Sep-1994 #sequence revision 26-May-1995 #text change 08-Oct-1999
C; Accession: S42449
R; Citron, M.; Schuster, H.
Cell 62, 591-598, 1990
A; Title: The c4 repressors of bacteriophages P1 and P7 are antisense RNAs.
A; Reference number: S42448; MUID: 90335968; PMID: 1696181
A; Accession: S42449
A; Status: preliminary; translation not shown
A; Molecule type: DNA
A; Residues: 1-11 <CIT>
A; Cross-references: EMBL: M35139; NID: g215705; PIDN: AAA32437.1; PID: g215707
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                               0; Mismatches
                                                                  0; Gaps
                                                                              0;
  Matches
            2; Conservative
                                                    0; Indels
            4 KK 5
Qу
              \perp
            2 KK 3
Db
RESULT 17
A58502
38K kidney stone protein - unidentified bacterium (fragment)
C; Species: unidentified bacterium
C;Date: 07-Feb-1997 #sequence revision 07-Feb-1997 #text change 10-Jul-1998
C; Accession: A58502
R; Binette, J.P.; Binette, M.B.
submitted to the Protein Sequence Database, October 1996
A; Description: The proteins of kidney and gallbladder stones.
A; Reference number: A58501
A; Accession: A58502
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <BIN>
A; Experimental source: human kidney stone containing Ca ox.mono and dihyd, 1%
struvite, CaPO4 carbonate & hydrox., and 4% protein
```

```
Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                   0: Indels
            6 TG 7
Qv
              11
Db
            4 TG 5
RESULT 18
JQ0395
hypothetical protein (nodB 3' region) - Azorhizobium caulinodans
N; Alternate names: hypothetical 1.4K protein
C; Species: Azorhizobium caulinodans
A; Note: host Sesbania rostrata
C;Date: 07-Sep-1990 #sequence revision 07-Sep-1990 #text change 03-Feb-1994
C; Accession: JQ0395
R; Goethals, K.; Gao, M.; Tomekpe, K.; Van Montagu, M.; Holsters, M.
Mol. Gen. Genet. 219, 289-298, 1989
A; Title: Common nodABC genes in Nod locus 1 of Azorhizobium caulinodans:
nucleotide sequence and plant-inducible expression.
A; Reference number: JQ0393; MUID: 90136519; PMID: 2615763
A; Accession: JQ0395
A; Molecule type: DNA
A; Residues: 1-11 <GOE>
A; Cross-references: GB:L18897
A; Experimental source: strain ORS571
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0:
            8 RR 9
Qy
              11
            2 RR 3
Db
RESULT 19
S66606
quinoline 2-oxidoreductase alpha chain - Comamonas testosteroni (fragment)
C; Species: Comamonas testosteroni
C;Date: 15-Feb-1997 #sequence revision 13-Mar-1997 #text change 17-Mar-1999
C; Accession: S66606
R; Schach, S.; Tshisuaka, B.; Fetzner, S.; Lingens, F.
Eur. J. Biochem. 232, 536-544, 1995
A; Title: Quinoline 2-oxidoreductase and 2-oxo-1, 2-dihydroquinoline 5, 6-
dioxygenase from Comamonas testosteroni 63. The first two enzymes in quinoline
and 3-methylquinoline degradation.
A; Reference number: $66606; MUID: 96035889; PMID: 7556204
A; Accession: S66606
A; Molecule type: protein
A; Residues: 1-11 <SCH>
A; Experimental source: strain 63
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
```

```
Matches 2; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
           10 PR 11
Qу
           10 PR 11
RESULT 20
I41138
acetyl ornithine deacetylase (argE) - Escherichia coli (fragment)
C; Species: Escherichia coli
C; Date: 31-May-1996 #sequence revision 31-May-1996 #text change 08-Oct-1999
C; Accession: I41138
R; Charlier, D.; Piette, J.; Glansdorff, N.
Nucleic Acids Res. 10, 5935-5948, 1982
A; Title: is3 can function as a mobile promoter in e.coli.
A; Reference number: I41137; MUID: 83064529; PMID: 6292860
A; Accession: I41138
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-11 < RES>
A; Cross-references: GB: J01589; NID: q145346; PIDN: AAA23485.1; PID: q551788
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            6 TG 7
Qу
              \pm 1
            9 TG 10
RESULT 21
S42587
celF protein - Escherichia coli (fragment)
C; Species: Escherichia coli
C;Date: 25-Dec-1994 #sequence revision 10-Nov-1995 #text_change 10-Nov-1995
C; Accession: S42587
R; Guzzo, A.; DuBow, M.S.
Mol. Gen. Genet. 242, 455-460, 1994
A; Title: A luxAB transcriptional fusion to the cryptic celf gene of Escherichia
coli displays increased luminescence in the presence of nickel.
A; Reference number: S42587; MUID: 94166755; PMID: 8121401
A; Accession: S42587
A; Molecule type: DNA
A; Residues: 1-11 <GUZ>
C; Genetics:
A; Gene: celF
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
 Matches
          2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            1 AT 2
Qу
              11
            5 AT 6
Db
```

```
RESULT 22
S33782
acetolactate synthase (EC 4.1.3.18) small chain, valine-sensitive - Serratia
marcescens (fragment)
C; Species: Serratia marcescens
C; Date: 19-Mar-1997 #sequence revision 24-Mar-1999 #text change 24-Mar-1999
C; Accession: S33782
R; Yang, J.H.; Kim, S.S.
Biochim. Biophys. Acta 1157, 178-184, 1993
A; Title: Purification and characterization of the valine sensitive acetolactate
synthase from Serratia marcescens ATCC 25419.
A; Reference number: S33781; MUID: 93283409; PMID: 8507653
A; Accession: S33782
A; Molecule type: protein
A; Residues: 1-11 <YAN>
A; Experimental source: ATCC 25419
C; Complex: heterotetramer; two small and two large chains
C: Function:
A; Description: catalyzes the condensation of pyruvate and alpha-ketobutyrate to
form alpha-aceto-alpha-hydroxybutyrate
A; Pathway: valine, leucine, and isoleucine biosynthesis
A; Note: this isoenzyme exhibits homotropic allosterism with pyruvate
C; Keywords: branched-chain amino acid biosynthesis; carbon-carbon lyase;
flavoprotein; heterotetramer; magnesium; oxo-acid-lyase; valine inhibition
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
           2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0;
                                                                      Gaps
                                                                              0;
            7 GR 8
Qу
              11
Db
            5 GR 6
RESULT 23
B41835
translation elongation factor EF-G homolog - Bacillus subtilis (fragment)
C; Species: Bacillus subtilis
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text change 05-Dec-1997
C; Accession: B41835
R; Mitchell, C.; Morris, P.W.; Vary, J.C.
J. Bacteriol. 174, 2474-2477, 1992
A; Title: Identification of proteins phosphorylated by ATP during sporulation of
Bacillus subtilis.
A; Reference number: A41835; MUID: 92210489; PMID: 1556067
A; Accession: B41835
A; Molecule type: protein
A; Residues: 1-11 <MIT>
A; Note: this protein is phosphorylated during stationary phase but not during
exponential growth
C; Keywords: phosphoprotein
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
             2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
```

```
5 KT 6
Qv
            5 KT 6
Db
RESULT 24
S14087
parasporal crystal protein CryIA.b - Bacillus thuringiensis (fragments)
N; Alternate names: delta-endotoxin
C; Species: Bacillus thuringiensis
C;Date: 19-Mar-1997 #sequence revision 18-Jul-1997 #text change 18-Jul-1997
C; Accession: S14087
R; Convents, D.; Cherlet, M.; van Damme, J.; Lasters, I.; Lauwereys, M.
Eur. J. Biochem. 195, 631-635, 1991
A; Title: Two structural domains as a general fold of the toxic fragment of the
Bacillus thuringiensis delta-endotoxins.
A; Reference number: S14087; MUID: 91153300; PMID: 1847865
A; Accession: S14087
A; Molecule type: protein
A; Residues: 1-11 <CON>
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            2; Conservative
            6 TG 7
Qy
              11
            3 TG 4
Db
RESULT 25
A44755
20alpha-hydroxysteroid dehydrogenase (EC 1.1.1.149) - Clostridium scindens
C; Species: Clostridium scindens
C; Date: 12-Mar-1993 #sequence revision 12-Mar-1993 #text change 17-Mar-1999
C; Accession: A44755
R; Krafft, A.E.; Hylemon, P.B.
J. Bacteriol. 171, 2925-2932, 1989
A; Title: Purification and characterization of a novel form of 20alpha-
hydroxysteroid dehydrogenase from Clostridium scindens.
A; Reference number: A44755; MUID: 89255043; PMID: 2722736
A; Accession: A44755
A; Molecule type: protein
A; Residues: 1-11 <KRA>
C; Comment: This enzyme was purified to homogeneity and shown to have 20alpha
hydroxysteroid dehydrogenase activity in the presence of NADH or NADPH. The
enzyme as purified lacked glyceraldehyde-3-phosphate dehydrogenase (GAPDH)
activity although the fragment shows near identify to known GAPDH sequences.
C; Keywords: homotetramer; NAD; NADP; oxidoreductase
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
             2; Conservative
            7 GR 8
```

Qу

| | |

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RESULT 26
E41476
probable antigen 5 - Mycobacterium leprae (fragment)
C; Species: Mycobacterium leprae
C;Date: 10-Apr-1992 #sequence revision 10-Apr-1992 #text change 18-Jun-1993
C; Accession: E41476
R; Hartskeerl, R.A.; van Rens, R.M.; Stabel, L.F.E.M.; de Wit, M.Y.L.; Klatser,
P.R.
Infect. Immun. 58, 2821-2827, 1990
A; Title: Selection and characterization of recombinant clones that produce
Mycobacterium leprae antigens recognized by antibodies in sera from household
contacts of leprosy patients.
A; Reference number: A41476; MUID: 90354041; PMID: 1696931
A; Accession: E41476
A; Status: preliminary; not compared with conceptual translation
A; Molecule type: DNA
A; Residues: 1-11 <HAR>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
             2; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
           10 PR 11
Qy
              5 PR 6
RESULT 27
S33519
probable secreted protein - Acholeplasma laidlawii (fragment)
C; Species: Acholeplasma laidlawii
C;Date: 06-Jan-1995 #sequence revision 06-Jan-1995 #text change 22-Oct-1999
C; Accession: S33519
R; Boyer, M.J.; Jarhede, T.K.; Tegman, V.; Wieslander, A.
submitted to the EMBL Data Library, June 1993
A; Description: Sequence regions from Acholeplasma laidlawii which restore export
of beta-lactamase in Escherichia coli.
A; Reference number: S33518
A; Accession: S33519
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-11 <BOY>
A;Cross-references: EMBL:Z22875; NID:g311706; PIDN:CAA80495.1; PID:g311708
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative
                                 0; Mismatches
                                                                              0;
 Matches
                                                    0; Indels
                                                                  0; Gaps
            4 KK 5
Qy
              + 1
Db
            2 KK 3
```

```
S19775
wound-induced protein - tomato (fragment)
C; Species: Lycopersicon esculentum (tomato)
C; Date: 30-Jun-1992 #sequence revision 30-Jun-1992 #text change 09-Sep-1997
C; Accession: S19775
R; Parsons, B.L.
submitted to the EMBL Data Library, May 1991
A: Reference number: S19773
A; Accession: S19775
A; Molecule type: mRNA
A; Residues: 1-11 < PAR>
A;Cross-references: EMBL:X59884; NID:g19323; PID:g19324
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
  Matches
            2; Conservative
                                0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                               0;
            4 KK 5
Qу
              \Pi
            5 KK 6
RESULT 29
PC4267
ribosomal protein L12.1 - rice (fragment)
C; Species: Oryza sativa (rice)
C;Date: 28-May-1997 #sequence revision 18-Jul-1997 #text change 18-Jul-1997
C; Accession: PC4267
R; Kawakami, T.; Kamo, M.; Chen, M.C.; Tsugita, A.
submitted to JIPID, April 1997
A; Reference number: PC4267
A; Accession: PC4267
A; Molecule type: protein
A; Residues: 1-11 <KAW>
A; Experimental source: strain Japonica Nihonbare
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
           2; Conservative
                               0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            1 AT 2
Qу
Db
            3 AT 4
RESULT 30
PO0731
unidentified 5.7/35K protein [imported] - rice (fragment)
C; Species: Oryza sativa (rice)
C;Date: 20-Apr-2000 #sequence revision 20-Apr-2000 #text change 20-Apr-2000
C; Accession: PQ0731
R; Komatsu, S.; Kajiwara, H.; Hirano, H.
Theor. Appl. Genet. 86, 935-942, 1993
A; Title: A rice protein library; a data-file of rice proteins separated by two-
dimensional electrophoresis.
A; Reference number: PQ0696
A; Accession: PO0731
```

```
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 < KOM>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            1 AT 2
Qу
            1 AT 2
Db
RESULT 31
PC2173
triacylglycerol lipase (EC 3.1.1.3) II - Rhizopus niveus (strain IFO 4759)
(fragments)
C; Species: Rhizopus niveus
C;Date: 03-May-1994 #sequence revision 07-Oct-1994 #text change 07-May-1999
C; Accession: PC2173
R;Kohno, M.; Kugimiya, W.; Hashimoto, Y.; Morita, Y.
Biosci. Biotechnol. Biochem. 58, 1007-1012, 1994
A; Title: Purification, characterization, and crystallization of two types of
lipase from Rhizopus niveus.
A; Reference number: PC2171; MUID: 94319059; PMID: 7765029
A; Accession: PC2173
A; Molecule type: protein
A; Residues: 1-10;11 <KOH>
C; Comment: This enzyme catalyzes the hydrolysis of the ester bonds of
triacylglycerols and the synthesis of ester bonds via transesterification.
C; Comment: This enzyme is produced from lipase I by limited proteolysis due to
the action of a serine protease.
C; Keywords: carboxylic ester hydrolase
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0:
            1 AT 2
Qy
Db
            9 AT 10
RESULT 32
S78026
ribosomal protein YmL29, mitochondrial - yeast (Saccharomyces cerevisiae)
(fragment)
C; Species: Saccharomyces cerevisiae
C;Date: 09-Oct-1997 #sequence revision 24-Oct-1997 #text change 14-Nov-1997
C; Accession: S78026
R; Kitakawa, M.; Graack, H.R.; Grohmann, L.; Goldschmidt-Reisin, S.; Herfurth,
E.; Wittmann-Liebold, B.; Nishimura, T.; Isono, K.
Eur. J. Biochem. 245, 449-456, 1997
A; Title: Identification and characterization of the genes for mitochondrial
ribosomal proteins of Saccharomyces cerevisiae.
A; Reference number: S78018; MUID: 97296414; PMID: 9151978
A; Accession: S78026
```

```
A; Molecule type: protein
A; Residues: 1-11 <KIT>
C:Genetics:
A; Genome: nuclear
C; Keywords: mitochondrion; protein biosynthesis; ribosome
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
             2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
           10 PR 11
Qу
              8 PR 9
Db
RESULT 33
A34135
DNA-binding protein p - Crithidia fasciculata mitochondrion (fragment)
C; Species: mitochondrion Crithidia fasciculata
C;Date: 30-Sep-1991 #sequence revision 30-Sep-1991 #text change 07-Dec-1999
C; Accession: A34135
R; Tittawella, I.
FEBS Lett. 260, 57-61, 1990
A; Title: Kinetoplast DNA-aggregating proteins from the parasitic protozoan
Crithidia fasciculata.
A; Reference number: A34135
A; Accession: A34135
A; Molecule type: protein
A; Residues: 1-11 <TIT>
C: Genetics:
A; Genome: mitochondrion
A; Genetic code: SGC6
C; Keywords: mitochondrion
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
                               0; Mismatches
          2; Conservative
                                                                              0;
                                                   0; Indels
                                                                  0; Gaps
           10 PR 11
Qy
              11
Db
            7 PR 8
RESULT 34
A61512
variant surface glycoprotein MITat 1.7 - Trypanosoma brucei (fragment)
C; Species: Trypanosoma brucei
C;Date: 28-Oct-1994 #sequence revision 28-Oct-1994 #text change 07-May-1999
C; Accession: A61512
R; Holder, A.A.; Cross, G.A.M.
Mol. Biochem. Parasitol. 2, 135-150, 1981
A; Title: Glycopeptides from variant surface glycoproteins of Trypanosoma brucei.
C-terminal location of antigenically cross-reacting carbohydrate moieties.
A; Reference number: A61512; MUID: 81172836; PMID: 6163983
A; Accession: A61512
A; Status: preliminary
```

A; Molecule type: protein

```
C; Keywords: glycoprotein
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            2; Conservative 0; Mismatches
                                                  0; Indels
  Matches
            6 TG 7
Qу
              -1.1
            9 TG 10
Db
RESULT 35
A26120
6-phosphofructokinase (EC 2.7.1.11) - pig roundworm (fragment)
N; Alternate names: phosphofructokinase; phosphohexokinase
C; Species: Ascaris suum (pig roundworm)
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 28-Apr-1993
C; Accession: A26120
R;Kulkarni, G.; Rao, G.S.J.; Srinivasan, N.G.; Hofer, H.W.; Yuan, P.M.; Harris,
B.G.
J. Biol. Chem. 262, 32-34, 1987
A; Title: Ascaris suum phosphofructokinase. Phosphorylation by protein kinase and
sequence of the phosphopeptide.
A; Reference number: A26120; MUID: 87083467; PMID: 3025208
A; Accession: A26120
A; Molecule type: protein
A; Residues: 1-11 <KUL>
C; Keywords: glycolysis; phosphotransferase
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0:
            7 GR 8
Qy
Db
            3 GR 4
RESULT 36
A34662
Achatina cardio-excitatory peptide-1 - giant African snail
C; Species: Achatina fulica (giant African snail)
C;Date: 22-Jun-1990 #sequence revision 22-Jun-1990 #text_change 11-Jul-1997
C; Accession: A34662
R; Fujimoto, K.; Ohta, N.; Yoshida, M.; Kubota, I.; Muneoka, Y.; Kobayashi, M.
Biochem. Biophys. Res. Commun. 167, 777-783, 1990
A; Title: A novel cardio-excitatory peptide isolated from the atria of the
African giant snail, Achatina fulica.
A; Reference number: A34662; MUID: 90211261; PMID: 2322251
A; Accession: A34662
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <FUJ>
C; Keywords: amidated carboxyl end
F;11/Modified site: amidated carboxyl end (Phe) #status experimental
```

A; Residues: 1-11 <HOL>

```
18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                               0; Mismatches
                                                0; Indels
                                                                  0; Gaps
                                                                              0;
            2: Conservative
           7 GR 8
Qу
              \perp
            9 GR 10
Db
RESULT 37
S05002
corazonin - American cockroach
C; Species: Periplaneta americana (American cockroach)
C;Date: 07-Sep-1990 #sequence revision 09-Apr-1998 #text change 09-Apr-1998
C; Accession: S05002
R; Veenstra, J.A.
FEBS Lett. 250, 231-234, 1989
A; Title: Isolation and structure of corazonin, a cardioactive peptide from the
american cockroach.
A; Reference number: S05002; MUID: 89325572; PMID: 2753132
A;Accession: S05002
A; Molecule type: protein
A; Residues: 1-11 <VEE>
C; Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;11/Modified site: amidated carboxyl end (Asn) #status experimental
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                                                              0;
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
            2 TN 3
Qу
Db
           10 TN 11
RESULT 38
S33300
probable substance P - smaller spotted catshark
C; Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted
dogfish)
C;Date: 19-Mar-1997 #sequence revision 19-Mar-1997 #text change 24-Mar-1999
C; Accession: S33300
R; Waugh, D.; Wang, Y.; Hazon, N.; Balment, R.J.; Conlon, J.M.
Eur. J. Biochem. 214, 469-474, 1993
A; Title: Primary structures and biological activities of substance-P-related
peptides from the brain of the dogfish, Scyliorhinus canicula.
A; Reference number: S33300; MUID: 93292508; PMID: 7685693
A; Accession: S33300
A; Molecule type: protein
A; Residues: 1-11 <WAU>
A; Experimental source: brain
C; Function:
A; Description: may play a physiological role in the regulation of cardiovascular
and gastrointestinal functions
A; Note: substance P is derived by post-translational processing of
preprotachykinin A
```

```
C; Keywords: amidated carboxyl end; neuropeptide; tachykinin
F;11/Modified site: amidated carboxyl end (Met) #status predicted
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
           10 PR 11
Qy
Db
            2 PR 3
RESULT 39
C37196
bradykinin-potentiating peptide 3 - island jararaca
C; Species: Bothrops insularis (island jararaca)
C;Date: 14-Feb-1992 #sequence revision 01-Dec-1992 #text change 05-Aug-1994
C; Accession: C37196
R; Cintra, A.C.O.; Vieira, C.A.; Giglio, J.R.
J. Protein Chem. 9, 221-227, 1990
A; Title: Primary structure and biological activity of bradykinin potentiating
peptides from Bothrops insularis snake venom.
A; Reference number: A37196; MUID: 90351557; PMID: 2386615
A; Accession: C37196
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <CIN>
C; Keywords: pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                0; Mismatches
                                                                              0;
  Matches
            2; Conservative
                                                   0; Indels
                                                                  0; Gaps
Qу
           10 PR 11
Db
            5 PR 6
RESULT 40
D37196
bradykinin-potentiating peptide 4 - island jararaca
C; Species: Bothrops insularis (island jararaca)
C; Date: 14-Feb-1992 #sequence revision 01-Dec-1992 #text change 05-Aug-1994
C; Accession: D37196
R; Cintra, A.C.O.; Vieira, C.A.; Giglio, J.R.
J. Protein Chem. 9, 221-227, 1990
A; Title: Primary structure and biological activity of bradykinin potentiating
peptides from Bothrops insularis snake venom.
A; Reference number: A37196; MUID: 90351557; PMID: 2386615
A; Accession: D37196
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <CIN>
C; Keywords: pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
```

```
Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
             2; Conservative
                                 0; Mismatches
                                                                  0; Gaps
                                                    0; Indels
                                                                              0;
           10 PR 11
Qу
              11
            5 PR 6
Db
RESULT 41
D57789
gallbladder stone matrix protein, 14.5K - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 23-Feb-1996 #sequence revision 23-Feb-1996 #text change 23-Feb-1996
C; Accession: D57789
R; Binette, J.P.; Binette, M.B.
submitted to the Protein Sequence Database, February 1996
A; Description: The proteins of gallbladder stones.
A; Reference number: A57789
A; Accession: D57789
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <BIN>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
  Matches
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            1 AT 2
Qу
              Db
            2 AT 3
RESULT 42
PT0250
Ig heavy chain CRD3 region (clone 2-109B) - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0250
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0250
A; Molecule type: DNA
A; Residues: 1-11 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                                                  0; Gaps
                                                                              0;
  Matches
            2; Conservative 0; Mismatches
                                                 0; Indels
            7 GR 8
Qv
              \perp
            7 GR 8
Db
```

```
RESULT 43
PT0273
Iq heavy chain CRD3 region (clone 3-109A) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0273
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0273
A; Molecule type: DNA
A; Residues: 1-11 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                 0; Mismatches
            2; Conservative
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
            9 RP 10
Qγ
              11
Db
            8 RP 9
RESULT 44
PT0287
Ig heavy chain CRD3 region (clone 4-103) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0287
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0287
A; Molecule type: DNA
A; Residues: 1-11 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            7 GR 8
Qу
Db
            5 GR 6
RESULT 45
PT0302
Ig heavy chain CRD3 region (clone 5-112) - human (fragment)
```

```
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0302
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0302
A; Molecule type: DNA
A; Residues: 1-11 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
  Matches
             2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qy
           10 PR 11
              11
            4 PR 5
Dh
RESULT 46
S13279
Ile-Ser-bradykinin - human (fragment)
N; Alternate names: T-kinin
C; Species: Homo sapiens (man)
C;Date: 02-Dec-1993 #sequence revision 13-Mar-1997 #text change 24-Jul-1998
C; Accession: S13279
R; Wunderer, G.; Walter, I.; Eschenbacher, B.; Lang, M.; Kellermann, J.;
Kindermann, G.
Biol. Chem. Hoppe-Seyler 371, 977-981, 1990
A;Title: Ile-Ser-bradykinin is an aberrant permeability factor in various human
malignant effusions.
A; Reference number: S13279; MUID: 91166748; PMID: 2076202
A; Accession: S13279
A; Molecule type: protein
A; Residues: 1-11 <WUN>
C; Keywords: bradykinin
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
            9 RP 10
Qу
              11
Db
            3 RP 4
RESULT 47
154193
Rhesus blood group CcEe protein - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 06-Sep-1996 #sequence revision 06-Sep-1996 #text change 21-Jul-2000
C; Accession: I54193
```

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R; Cherif-Zahar, B.; Le Van Kim, C.; Rouillac, C.; Raynal, V.; Cartron, J.P.;
Colin, Y.
Genomics 19, 68-74, 1994
A; Title: Organization of the gene (RHCE) encoding the human blood group RhCcEe
antigens and characterization of the promoter region.
A; Reference number: I54193; MUID: 94245182; PMID: 8188244
A; Accession: I54193
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-11 <RES>
A; Cross-references: GB: S70456; NID: g546795; PIDN: AAD14061.1; PID: g4261761
C; Genetics:
A; Gene: GDB: RHCE
A; Cross-references: GDB:229957; OMIM:111700
A: Map position: 1p36.2-1p34
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2; Conservative 0; Mismatches
            8 RR 9
Qу
              10 RR 11
Db
RESULT 48
S51732
T-cell receptor alpha chain joining region - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 07-May-1995 #sequence revision 01-Sep-1995 #text change 05-Nov-1999
C; Accession: S51732
R; Durinovic-Bello, I.; Steinle, A.; Ziegler, A.G.; Schendel, D.J.
submitted to the EMBL Data Library, November 1993
A; Reference number: S51732
A; Accession: S51732
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-11 < DUR>
A; Cross-references: EMBL: Z28343; NID: g607116; PIDN: CAA82197.1; PID: g607117
C; Keywords: T-cell receptor
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                                 0; Gaps
                                                                               0;
            2; Conservative 0; Mismatches
                                                    0; Indels
  Matches
Qy
            6 TG 7
              11
            6 TG 7
Dh
RESULT 49
S23926
major glycoprotein PAS-6 - bovine (fragment)
C; Species: Bos primigenius taurus (cattle)
C;Date: 19-Mar-1997 #sequence_revision 01-Feb-1999 #text_change 01-Feb-1999
C; Accession: S23926
R; Kim, D.H.; Kanno, C.; Mizokami, Y.
```

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Biochim. Biophys. Acta 1122, 203-211, 1992
A:Title: Purification and characterization of major glycoproteins, PAS-6 and
PAS-7, from bovine milk fat globule membrane.
A; Reference number: S23926; MUID: 92353107; PMID: 1643094
A; Accession: S23926
A: Molecule type: protein
A; Residues: 1-11 <KIM>
C; Keywords: glycoprotein; milk; blocked amino end
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                               0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            2; Conservative
  Matches
            3 NK 4
Qу
              | | |
            4 NK 5
Db
RESULT 50
S54347
tubulin beta chain - bovine (fragment)
C; Species: Bos primigenius taurus (cattle)
C;Date: 27-Oct-1995 #sequence revision 30-Jan-1998 #text change 07-May-1999
C; Accession: S54347
R;Okazaki, K.; Obata, N.H.; Inoue, S.; Hidaka, H.
Biochem. J. 306, 551-555, 1995
A; Title: S100-beta is a target protein of neurocalcin delta, an abundant isoform
in glial cells.
A; Reference number: S54343; MUID: 95194333; PMID: 7887910
A; Accession: S54347
A; Molecule type: protein
A; Residues: 1-11 < OKA>
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                    0; Indels
                                                                  0; Gaps
  Matches
            2; Conservative 0; Mismatches
            1 AT 2
Qу
              1.1
Dh
            8 AT 9
RESULT 51
A14454
6-phosphofructokinase (EC 2.7.1.11) - sheep (fragment)
C; Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 05-Jun-1987 #sequence revision 05-Jun-1987 #text change 28-Apr-1993
C; Accession: A14454
R; Fordyce, A.M.; Midwinter, G.G.; Moore, C.H.
Biochem. Soc. Trans. 7, 721-723, 1979
A; Title: The N-terminal amino acid sequence of sheep heart phosphofructokinase.
A; Reference number: A14454; MUID: 80004524; PMID: 157899
A; Accession: A14454
A; Molecule type: protein
A; Residues: 1-11 <FOR>
```

C; Keywords: glycolysis; phosphotransferase

```
Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative
                              0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                             0;
            5 KT 6
Qу
              11
            9 KT 10
Db
RESULT 52
B29806
acidic proline-rich protein HP43a - golden hamster (fragment)
C; Species: Mesocricetus auratus (golden hamster)
C;Date: 19-May-1989 #sequence revision 19-May-1989 #text change 18-Jun-1993
C; Accession: B29806
R; Mehansho, H.; Ann, D.K.; Butler, L.G.; Rogler, J.; Carlson, D.M.
J. Biol. Chem. 262, 12344-12350, 1987
A; Title: Induction of proline-rich proteins in hamster salivary glands by
isoproterenol treatment and an unusual growth inhibition by tannins.
A; Reference number: A92611; MUID: 87308247; PMID: 3040740
A; Accession: B29806
A; Molecule type: protein
A; Residues: 1-11 <MEH>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
             2; Conservative 0; Mismatches
 Matches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
Qy
            1 AT 2
              11
Dh
            1 AT 2
RESULT 53
A29806
acidic proline-rich protein HP43b - golden hamster (fragment)
C; Species: Mesocricetus auratus (golden hamster)
C;Date: 19-May-1989 #sequence revision 19-May-1989 #text change 18-Jun-1993
C; Accession: A29806
R; Mehansho, H.; Ann, D.K.; Butler, L.G.; Rogler, J.; Carlson, D.M.
J. Biol. Chem. 262, 12344-12350, 1987
A; Title: Induction of proline-rich proteins in hamster salivary glands by
isoproterenol treatment and an unusual growth inhibition by tannins.
A; Reference number: A92611; MUID: 87308247; PMID: 3040740
A; Accession: A29806
A; Molecule type: protein
A; Residues: 1-11 <MEH>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                             0;
            1 AT 2
Qу
              11
Dh
            1 AT 2
```

```
PH1632
Iq H chain V-D-J region (clone B-less 209) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 02-Jun-1994 #sequence revision 02-Jun-1994 #text change 17-Mar-1999
C; Accession: PH1632
R; Levinson, D.A.; Campos-Torres, J.; Leder, P.
J. Exp. Med. 178, 317-329, 1993
A; Title: Molecular characterization of transgene-induced immunodeficiency in B-
less mice using a novel quantitative limiting dilution polymerase chain reaction
method.
A; Reference number: PH1580; MUID: 93301609; PMID: 8315387
A; Accession: PH1632
A; Molecule type: DNA
A; Residues: 1-11 <LEV>
A; Experimental source: bone marrow pre-B lymphocyte
C; Keywords: immunoglobulin
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
  Matches
           2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            8 RR 9
              11
            3 RR 4
Db
RESULT 55
PH1376
T antigen variant K-3 - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 16-Jul-1999 #sequence revision 16-Jul-1999 #text change 11-May-2000
C; Accession: PH1376
R; Lill, N.L.; Judith Tevethia, M.; Hendrickson, W.G.; Tevethia, S.S.
J. Exp. Med. 176, 449-457, 1992
A; Title: Cytotoxic T lymphocytes (CTL) against a transforming gene product
select for transformed cells with point mutations within sequences encoding CTL
recognition epitopes.
A; Reference number: PH1373; MUID: 92364547; PMID: 1380062
A; Accession: PH1376
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-11 <LIL>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
  Matches
           2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            3 NK 4
Qy
              \Pi
            5 NK 6
Dh
RESULT 56
PT0211
T-cell receptor alpha chain V-J region (4-1-G.4) - mouse (fragment)
C; Species: Mus musculus (house mouse)
```

RESULT 54

```
C; Date: 31-Dec-1991 #sequence revision 31-Dec-1991 #text change 30-May-1997
C; Accession: PT0211
R; Nakano, N.; Kikutani, H.; Nishimoto, H.; Kishimoto, T.
J. Exp. Med. 173, 1091-1097, 1991
A; Title: T cell receptor V gene usage of islet beta cell-reactive T cells is not
restricted in non-obese diabetic mice.
A; Reference number: PT0209; MUID: 91217621; PMID: 1902501
A; Accession: PT0211
A; Molecule type: mRNA
A; Residues: 1-11 < NAK>
C; Keywords: T-cell receptor
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative
                              0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            6 TG 7
Qу
              Db
            7 TG 8
RESULT 57
C38887
T-cell receptor gamma chain (5a.3) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C; Date: 03-Feb-1994 #sequence revision 03-Feb-1994 #text change 07-May-1999
C:Accession: C38887
R; Whetsell, M.; Mosley, R.L.; Whetsell, L.; Schaefer, F.V.; Miller, K.S.; Klein,
J.R.
Mol. Cell. Biol. 11, 5902-5909, 1991
A; Title: Rearrangement and junctional-site sequence analyses of T-cell receptor
gamma genes in intestinal intraepithelial lymphocytes from murine athymic
chimeras.
A; Reference number: A41946; MUID: 92049316; PMID: 1658619
A; Accession: C38887
A; Status: preliminary; not compared with conceptual translation
A; Molecule type: DNA
A; Residues: 1-11 <WHE>
C; Keywords: T-cell receptor
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches 0;
                                                                  0; Gaps
                                                                             0;
 Matches
                                                      Indels
            7 GR 8
Qу
              5 GR 6
Db
RESULT 58
S45386
low density lipoprotein receptor-related protein - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 16-Feb-1995 #sequence revision 10-Nov-1995 #text change 10-Nov-1995
C; Accession: S45386
R; Herz, J.; Kowal, R.C.; Goldstein, J.L.; Brown, M.S.
EMBO J. 9, 1769-1776, 1990
```

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A; Title: Proteolytic processing of the 600 kd low density lipoprotein receptor-
related protein (LRP) occurs in a trans-Golgi compartment.
A; Reference number: S12538; MUID: 90269210; PMID: 2112085
A; Accession: S45386
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <HER>
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            2 TN 3
QУ
              11
Db
            7 TN 8
RESULT 59
S09349
microtubule-associated protein MAP2 - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 19-Mar-1997 #sequence revision 29-Aug-1997 #text change 21-Nov-1998
C; Accession: S09349
R; Papandrikopoulou, A.; Doll, T.; Tucker, R.P.; Garner, C.C.; Matus, A.
Nature 340, 650-652, 1989
A; Title: Embryonic MAP2 lacks the cross-linking sidearm sequences and dendritic
targeting signal of adult MAP2.
A; Reference number: S09349; MUID: 89365159; PMID: 2770869
A; Accession: S09349
A; Status: not compared with conceptual translation
A; Molecule type: mRNA
A: Residues: 1-11 < PAP>
C; Genetics:
A; Gene: MAP2
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
Qy
            1 AT 2
              \mathbf{I}
Dh
            5 AT 6
RESULT 60
PH0929
T-cell receptor beta chain V-D-J region (clone 15) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text change 30-May-1997
C; Accession: PH0929
R; Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0929
A; Molecule type: mRNA
```

```
A: Residues: 1-11 <GOL>
A; Experimental source: concanavalin A-activated lymphoblast
C: Keywords: T-cell receptor
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 3.4e+04;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            2; Conservative 0; Mismatches
                                                   0; Indels
  Matches
            9 RP 10
Qу
              4 RP 5
Db
RESULT 61
PH0938
T-cell receptor beta chain V-D-J region (clone 9) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text change 30-May-1997
C; Accession: PH0938
R; Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0938
A; Molecule type: mRNA
A; Residues: 1-11 <GOL>
A; Experimental source: complete Freund's adjuvant-immunized lymph node
C; Keywords: T-cell receptor
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
                                                                  0; Gaps
                                                                              0;
  Matches
            2; Conservative
                                0; Mismatches
                                                   0; Indels
Qу
            7 GR 8
              7 GR 8
Db
RESULT 62
PH0947
T-cell receptor beta chain V-D-J region (clone A2) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text_change 30-May-1997
C; Accession: PH0947
R; Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0947
A; Molecule type: mRNA
A; Residues: 1-11 <GOL>
A; Experimental source: myelin basic protein fragment-reactive T-cell, recovered
from experimentally induced allergic encephalomyelitis
C; Keywords: T-cell receptor
```

```
18.2%; Score 2; DB 2; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.4e+04;
            2: Conservative
                              0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
           8 RR 9
Qy
             \perp
           4 RR 5
Db
RESULT 63
PH0919
T-cell receptor beta chain V-D-J region (isolate 5) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text change 30-May-1997
C; Accession: PH0919
R; Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0919
A; Molecule type: mRNA
A; Residues: 1-11 <GOL>
A; Experimental source: concanavalin A-activated lymphoblast
A; Note: the authors translated the codon CAG for residue 11 as Glu
C; Keywords: T-cell receptor
 Query Match
                          18.2%; Score 2; DB 2; Length 11;
 Best Local Similarity 100.0%; Pred. No. 3.4e+04;
                                                                             0;
 Matches 2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
            6 TG 7
Qy
             11
           9 TG 10
Db
RESULT 64
I52304
gene rSSTR4 protein - rat (fragment)
C; Species: Rattus sp. (rat)
C;Date: 29-May-1998 #sequence revision 29-May-1998 #text_change 17-Mar-1999
C; Accession: I52304
R; Xu, Y.; Bruno, J.F.; Berelowitz, M.
Biochem. Biophys. Res. Commun. 206, 935-941, 1995
A; Title: Characterization of the proximal promoter region of the rat
somatostatin receptor gene, SSTR4.
A; Reference number: I52304; MUID: 95134278; PMID: 7832807
A; Accession: I52304
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-11 <RES>
A; Cross-references: GB: S75475; NID: g914315
C; Genetics:
A; Gene: rSSTR4
                          18.2%; Score 2; DB 2; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.4e+04;
```

```
Matches 2; Conservative
                                 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            1 AT 2
QУ
              - 1
            5 AT 6
Db
RESULT 65
A48973
glucoamylase Al (EC 3.2.1.-) - Chalara paradoxa (fragment)
C; Species: Chalara paradoxa
C; Date: 19-Dec-1993 #sequence revision 25-Apr-1997 #text change 25-Apr-1997
C; Accession: A48973
R; Monma, M.; Kainuma, K.
Carbohydr. Res. 227, 385-388, 1992
A; Title: Heterogeneity of the glucoamylase components of the raw-starch-
digesting amylase from Chalara paradoxa.
A; Reference number: A48973; MUID: 92361881; PMID: 1499035
A; Accession: A48973
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 < MON>
A; Note: sequence extracted from NCBI backbone (NCBIP:110946)
C; Keywords: glycosidase; hydrolase
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
  Matches
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            1 AT 2
Qy
              11
            1 AT 2
Db
RESULT 66
PN0169
NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - fungus (Fusarium
sporotrichioides) (fragment)
C; Species: Fusarium sporotrichioides
C; Date: 05-Aug-1994 #sequence revision 05-Aug-1994 #text change 03-Jun-2002
C; Accession: PN0169
R; Fukaya, N.; Chow, L.P.; Sugiura, Y.; Tsugita, A.; Ueno, Y.; Tabuchi, K.
submitted to JIPID, May 1994
A; Description: Two dimensional polyacrylamide gel electrophoresis of Fusarium
sporotrichioides proteins and the partial amino acid sequence of a peptidyl-
prolyl cis-trans isomerase.
A; Reference number: PN0160
A; Accession: PN0169
A; Molecule type: protein
A; Residues: 1-11 <FUK>
A; Experimental source: strain M-1-1
C; Keywords: NAD; oxidoreductase
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
             2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0: Gaps
                                                                              0;
```

```
6 TG 7
QУ
           10 TG 11
Db
RESULT 67
S52252
hypothetical protein pco 5'-region - Escherichia coli plasmid pRJ1004 (fragment)
C; Species: Escherichia coli
C; Date: 22-Oct-1999 #sequence revision 22-Oct-1999 #text change 22-Oct-1999
C; Accession: S70166; S52252
R; Brown, N.L.; Barrett, S.R.; Camakaris, J.; Lee, B.T.O.; Rouch, D.A.
Mol. Microbiol. 17, 1153-1166, 1995
A; Title: Molecular genetics and transport analysis of the copper-resistance
determinant (pco) from Escherichia coli plasmid pRJ1004.
A; Reference number: S70159; MUID: 96130847; PMID: 8594334
A; Accession: S70166
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-11 <BRO>
A; Cross-references: EMBL: X83541; NID: g619126; PIDN: CAA58524.1; PID: g619127
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January
C; Comment: This is the hypothetical translation of a sequence that was not
reported as a coding sequence in the complete genome.
C; Genetics:
A; Genome: plasmid pRJ1004
  Query Match
                          18.2%; Score 2; DB 4; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 3.4e+04;
 Matches
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                      Gaps
                                                                              0;
            1 AT 2
Qу
            7 AT 8
Db
RESULT 68
S19015
hypothetical protein 11 ruvC-yebC intergenic region - Escherichia coli
C; Species: Escherichia coli
C;Date: 15-Oct-1999 #sequence revision 15-Oct-1999 #text change 15-Oct-1999
C; Accession: S19015
R; Sharples, G.J.; Lloyd, R.G.
J. Bacteriol. 173, 7711-7715, 1991
A; Title: Resolution of Holliday junctions in Escherichia coli: identification of
the ruvC gene product as a 19-kilodalton protein.
A; Reference number: S19013; MUID: 92041688; PMID: 1657895
A; Accession: S19015
A; Molecule type: DNA
A; Residues: 1-11 <SHA>
A;Cross-references: EMBL:X59551; NID:g42172; PIDN:CAA42127.1; PID:g42174
```

Query Match 18.2%; Score 2; DB 4; Length 11; Best Local Similarity 100.0%; Pred. No. 3.4e+04;

reported as a coding sequence in the complete genome.

C; Comment: This is the hypothetical translation of a sequence that was not

```
2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                             0;
            9 RP 10
Qy
              11
Db
            2 RP 3
RESULT 69
ECLQ2M
tachykinin II - migratory locust
C; Species: Locusta migratoria (migratory locust)
C; Date: 31-Dec-1991 #sequence revision 31-Dec-1991 #text change 08-Dec-1995
C; Accession: S08266
R; Schoofs, L.; Holman, G.M.; Hayes, T.K.; Nachman, R.J.; de Loof, A.
FEBS Lett. 261, 397-401, 1990
A; Title: Locustatachykinin I and II, two novel insect neuropeptides with
homology to peptides of the vertebrate tachykinin family.
A; Reference number: S08265; MUID: 90184489; PMID: 2311766
A; Accession: S08266
A; Molecule type: protein
A; Residues: 1-11 <SCH>
C; Superfamily: tachykinin
C; Keywords: amidated carboxyl end; neuropeptide; tachykinin
F;11/Modified site: amidated carboxyl end (Arg) #status experimental
 Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 2.1e+05;
           1; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           1 A 1
Qy
Db
            1 A 1
RESULT 70
EOOCC
eledoisin - curled octopus
C; Species: Eledone cirrosa, Ozaena cirrosa (curled octopus)
C;Date: 31-Dec-1991 #sequence revision 31-Dec-1991 #text change 20-Mar-1998
C; Accession: B01561; A01561
R; Anastasi, A.; Erspamer, V.
Arch. Biochem. Biophys. 101, 56-65, 1963
A; Title: The isolation and amino acid sequence of eledoisin, the active
endecapeptide of the posterior salivary glands of Eledone.
A; Reference number: A01561
A; Accession: B01561
A; Molecule type: protein
A; Residues: 1-11 < ANA>
C; Superfamily: substance P precursor
C; Keywords: amidated carboxyl end; hormone; pyroglutamic acid; salivary gland;
secretagogue; vasodilator; venom
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;11/Modified site: amidated carboxyl end (Met) #status experimental
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 2.1e+05;
            1; Conservative 0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                             0;
```

```
10 P 10
Qy
Db
            2 P 2
RESULT 71
EOOC
eledoisin - musky octopus
C; Species: Eledone moschata, Ozaena moschata (musky octopus)
C;Date: 13-Jul-1981 #sequence revision 13-Jul-1981 #text change 20-Mar-1998
C; Accession: A01561
R; Anastasi, A.; Erspamer, V.
Arch. Biochem. Biophys. 101, 56-65, 1963
A; Title: The isolation and amino acid sequence of eledoisin, the active
endecapeptide of the posterior salivary glands of Eledone.
A; Reference number: A01561
A; Accession: A01561
A; Molecule type: protein
A; Residues: 1-11 <ANA>
C; Superfamily: substance P precursor
C; Keywords: amidated carboxyl end; hormone; pyroglutamic acid; salivary gland;
secretagogue; vasodilator; venom
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;11/Modified site: amidated carboxyl end (Met) #status experimental
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 2.1e+05;
 Matches
            1; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
           10 P 10
QУ
            2 P 2
RESULT 72
GMROL
leucosulfakinin - Madeira cockroach
N; Alternate names: LSK
C; Species: Leucophaea maderae (Madeira cockroach)
C;Date: 17-Mar-1987 #sequence revision 17-Mar-1987 #text change 13-Sep-1996
C; Accession: A01622
R; Nachman, R.J.; Holman, G.M.; Haddon, W.F.; Ling, N.
Science 234, 71-73, 1986
A; Title: Leucosulfakinin, a sulfated insect neuropeptide with homology to
gastrin and cholecystokinin.
A; Reference number: A01622; MUID: 86315858; PMID: 3749893
A; Accession: A01622
A; Molecule type: protein
A; Residues: 1-11 < NAC>
C; Superfamily: gastrin
C; Keywords: amidated carboxyl end; hormone; sulfoprotein
F;6/Binding site: sulfate (Tyr) (covalent) #status experimental
F;11/Modified site: amidated carboxyl end (Phe) #status experimental
  Ouerv Match
                           9.1%; Score 1; DB 1; Length 11;
```

Best Local Similarity 100.0%; Pred. No. 2.1e+05;

```
Matches 1; Conservative 0; Mismatches
                                                                 0; Gaps
                                                                              0;
                                                   0; Indels
            7 G 7
Qу
           7 G 7
Db
RESULT 73
LFTWWE
probable trpEG leader peptide - Thermus aquaticus
C; Species: Thermus aquaticus
C;Date: 30-Jun-1991 #sequence revision 30-Jun-1991 #text change 16-Jul-1999
C; Accession: S03315
R; Sato, S.; Nakada, Y.; Kanaya, S.; Tanaka, T.
Biochim. Biophys. Acta 950, 303-312, 1988
A; Title: Molecular cloning and nucleotide sequence of Thermus thermophilus HB8
trpE and trpG.
A; Reference number: S03315; MUID: 89000781; PMID: 2844259
A; Accession: S03315
A; Molecule type: DNA
A; Residues: 1-11 <SAT>
A; Cross-references: EMBL: X07744; NID: q48261; PIDN: CAA30565.1; PID: q48262
A; Note: the source is designated as Thermus thermophilus HB8
C; Genetics:
A:Gene: trpL
C; Superfamily: probable trpEG leader peptide
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 2.1e+05;
            1; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            1 A 1
Qу
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C;Date: 14-Feb-1997 #sequence revision 13-Mar-1997 #text change 12-Jun-1998
C; Accession: S66196
R; Hjelmqvist, L.; Hackett, M.; Shafqat, J.; Danielsson, O.; Iida, J.;
Hendrickson, R.C.; Michel, H.; Shabanowitz, J.; Hunt, D.F.; Joernvall, H.
FEBS Lett. 367, 237-240, 1995
A; Title: Multiplicity of N-terminal structures of medium-chain alcohol
dehydrogenases. Mass-spectrometric analysis of plant, lower vertebrate and
higher vertebrate class I, II, and III forms of the enzyme.
A; Reference number: S66191; MUID: 95331382; PMID: 7607314
A; Accession: S66196
A; Molecule type: protein
A; Residues: 1-11 <HJE>
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C;Date: 04-Mar-1993 #sequence revision 18-Nov-1994 #text change 17-Feb-2003
C; Accession: G42762
R; Dick, L.R.; Moomaw, C.R.; Pramanik, B.C.; DeMartino, G.N.; Slaughter, C.A.
Biochemistry 31, 7347-7355, 1992
A; Title: Identification and localization of a cysteinyl residue critical for the
trypsin-like catalytic activity of the proteasome.
A; Reference number: A42762; MUID: 92378961; PMID: 1510924
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Search completed: April 8, 2004, 15:49:25 Job time: 8.61538 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 8, 2004, 15:47:33; Search time 30.3077 Seconds

(without alignments)

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## ALIGNMENTS

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- ; GENERAL INFORMATION:
- ; APPLICANT: Stein, Stanley
- ; TITLE OF INVENTION: CARRIER FOR IN VIVO DELIVERY OF A THERAPEUTIC
- ; FILE REFERENCE: 601-1-083

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  CURRENT FILING DATE: 2001-03-08
; PRIOR APPLICATION NUMBER: 09/044,411
; PRIOR FILING DATE: 1998-03-19
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   LOCATION: (10)
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  APPLICANT: Dowdy, Steven F.
  TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
 FILE REFERENCE: 48881/1742
 CURRENT APPLICATION NUMBER: US/09/775,052
  CURRENT FILING DATE: 2001-02-01
 PRIOR APPLICATION NUMBER: 09/208,966
 PRIOR FILING DATE: 1998-12-10
  PRIOR APPLICATION NUMBER: 60/082,402
  PRIOR FILING DATE: 1998-04-20
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; APPLICANT: Dowdy, Steven F.
  TITLE OF INVENTION: ANTI-PATHOGEN SYSTEM AND METHODS OF USE THEREOF
  FILE REFERENCE: 48881/1742
  CURRENT APPLICATION NUMBER: US/09/775,052
  CURRENT FILING DATE: 2001-02-01
  PRIOR APPLICATION NUMBER: 09/208,966
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  APPLICANT: Hemmings, Brian A
  APPLICANT: Millward, Thomas A
  TITLE OF INVENTION: Calcium Regulated Kinase
  FILE REFERENCE: 30110
  CURRENT APPLICATION NUMBER: US/10/108,795
  CURRENT FILING DATE: 2002-03-28
  PRIOR APPLICATION NUMBER: 09/133,062
  PRIOR FILING DATE: 1998-08-12
  PRIOR APPLICATION NUMBER: GB 9717089.8
 PRIOR FILING DATE: 1997-08-12
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; PRIOR FILING DATE: 1998-08-19
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; SOFTWARE: PatentIn Ver. 2.0

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  APPLICANT: Hemmings, Brian A
  APPLICANT: Millward, Thomas A
  TITLE OF INVENTION: Calcium Regulated Kinase
  FILE REFERENCE: 30110
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  APPLICANT: Millward, Thomas A
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; Publication No. US20040009463A1
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         APPLICANT: Simons, Michael
                    Gao, Youhe
         TITLE OF INVENTION: Method for PR-39 peptide mediated
                             selective inhibition of IKBA degradation
         NUMBER OF SEQUENCES: 6
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: David Prashker, Esq.
              STREET: P.O. Box 5387
              CITY: Magnolia
              STATE: Massachusetts
              COUNTRY: USA
              ZIP: 01930
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette, 3.50 inch, 1.40 Mb storage
              COMPUTER: Dell PC
              OPERATING SYSTEM: MS XP
              SOFTWARE: WordPerfect version 10
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/10/391,155
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FILING DATE: 18-Mar-2003
;
             CLASSIFICATION: Unknown
        ATTORNEY/AGENT INFORMATION:
             NAME: David Prashker, Esq.
             REGISTRATION NUMBER: 29,693
             REFERENCE/DOCKET NUMBER: BIS-044/D
        TELECOMMUNICATION INFORMATION:
             TELEPHONE: (978) 525-3794
   INFORMATION FOR SEQ ID NO: 4:
         SEQUENCE CHARACTERISTICS:
             LENGTH: 11 amino acids
             TYPE: amino acid
             STRANDEDNESS: single
             TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-10-391-155-4
  Query Match
                         36.4%; Score 4; DB 15; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+03;
 Matches
            4; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
           8 RRPR 11
             1111
           2 RRPR 5
Dh
RESULT 8
US-09-850-373-1
; Sequence 1, Application US/09850373
; Patent No. US20010051605A1
; GENERAL INFORMATION:
; APPLICANT: Strayer, David S
  TITLE OF INVENTION: Epidermal Growth Factor Inhibitor
  FILE REFERENCE: JEFF-0226-DIV
  CURRENT APPLICATION NUMBER: US/09/850,373
  CURRENT FILING DATE: 2001-05-07
  PRIOR APPLICATION NUMBER: 08/530,340
  PRIOR FILING DATE: 1995-12-22
  PRIOR APPLICATION NUMBER: PCT/US94/03675
  PRIOR FILING DATE: 1994-04-04
  PRIOR APPLICATION NUMBER: 08/041,774
  PRIOR FILING DATE: 1993-04-02
; NUMBER OF SEQ ID NOS: 7
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: An epidermal
    OTHER INFORMATION: growth factor inhibitor peptide
US-09-850-373-1
                         27.3%; Score 3; DB 9; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
 Matches
                                                               0; Gaps
                                                                            0:
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4 KKT 6
Qy
              111
Db
           8 KKT 10
RESULT 9
US-09-853-530A-5
; Sequence 5, Application US/09853530A
; Patent No. US20020048590A1
    GENERAL INFORMATION:
        APPLICANT: Klimpel, Kurt
                    Goletz, Theresa J.
                    Arora, Naveen
                    Leppla, Stephen H.
                    Berzofsky, Jay A.
         TITLE OF INVENTION: Targeting Antigens to the MHC Class I
                             Processing Pathway With an Anthrax Toxin Fusion
Protein
        NUMBER OF SEQUENCES: 5
        CORRESPONDENCE ADDRESS:
              ADDRESSEE: Townsend and Townsend and Crew LLP
              STREET: Two Embarcadero Center, Eighth Floor
              CITY: San Francisco
              STATE: California
              COUNTRY: USA
              ZIP: 94111-3834
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.30
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/853,530A
              FILING DATE: 09-May-2001
              CLASSIFICATION: <Unknown>
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/937,276
              FILING DATE: <Unknown>
        ATTORNEY/AGENT INFORMATION:
              NAME: Weber, Kenneth A.
              REGISTRATION NUMBER: 31,677
              REFERENCE/DOCKET NUMBER: 015280-290100US
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (415) 576-0200
              TELEFAX: (415) 576-0300
   INFORMATION FOR SEQ ID NO: 5:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              STRANDEDNESS: <Unknown>
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 5:
US-09-853-530A-5
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27.3%; Score 3; DB 9; Length 11;

Query Match

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Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
  Matches
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Qу
              Db
            4 GRR 6
RESULT 10
US-09-871-961-2
; Sequence 2, Application US/09871961
; Patent No. US20020061544A1
; GENERAL INFORMATION:
; APPLICANT: SARMA, Puranam U.
  APPLICANT: MADAN, Taruna
  APPLICANT: PRIYADARSINY, Priyanka
  APPLICANT: KATTI, Seturam B.
  APPLICANT: HAQ, Wahajul
  TITLE OF INVENTION: NOVEL POLYPEPTIDES USEFUL FOR DIAGNOSIS OF ASPERGILLUS
  TITLE OF INVENTION: FUMIGATUS AND A PROCESS OF PREPARING THE SAME
  FILE REFERENCE: 2761-115P
  CURRENT APPLICATION NUMBER: US/09/871,961
  CURRENT FILING DATE: 2001-06-04
 NUMBER OF SEQ ID NOS: 29
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Aspergillus fumigatus
US-09-871-961-2
 Query Match
                         27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           2 TNK 4
Qу
              I \mid I
Db
           5 TNK 7
RESULT 11
US-09-845-667-1
; Sequence 1, Application US/09845667
; Patent No. US20020065221A1
   GENERAL INFORMATION:
        APPLICANT: Cohen, Philip
                   Alessi, Dario
                   Cross, Darren
        TITLE OF INVENTION: CONTROL OF PROTEIN SYNTHESIS, AND SCREENING METHOD
                            FOR AGENTS
        NUMBER OF SEQUENCES: 58
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Braman & Rogalskyj, LLP
             STREET: P.O. Box 352
             CITY: Canandaigua
             STATE: New York
             COUNTRY: USA
```

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ZIP: 14424-0352
         COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.30
        CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/845,667
              FILING DATE: 30-Apr-2001
              CLASSIFICATION: <Unknown>
        PRIOR APPLICATION DATA:
             APPLICATION NUMBER: US 09/091,763
              FILING DATE: 19-JUN-1998
             APPLICATION NUMBER: PCT/GB96/03186
              FILING DATE: 20-DEC-1996
             APPLICATION NUMBER: GB 9526083.2
              FILING DATE: 20-DEC-1995
             APPLICATION NUMBER: GB 9610272.8
              FILING DATE: 16-MAY-1996
             APPLICATION NUMBER: GB 9615066.9
              FILING DATE: 18-JUL-1996
        ATTORNEY/AGENT INFORMATION:
             NAME: Braman, Susan J
              REGISTRATION NUMBER: 34,103
              REFERENCE/DOCKET NUMBER: 002.00041
        TELECOMMUNICATION INFORMATION:
             TELEPHONE: 716-393-3002
             TELEFAX: 716-393-3001
   INFORMATION FOR SEQ ID NO: 1:
        SEQUENCE CHARACTERISTICS:
             LENGTH: 11 amino acids
             TYPE: amino acid
             STRANDEDNESS: single
             TOPOLOGY: linear
        MOLECULE TYPE: peptide
        SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-845-667-1
 Query Match
                         27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches 0; Indels
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Qу
           9 RPR 11
              111
           2 RPR 4
RESULT 12
US-09-820-893-116
; Sequence 116, Application US/09820893
; Patent No. US20020076705A1
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 31 Human Secreted Proteins
; FILE REFERENCE: PZ033P1
; CURRENT APPLICATION NUMBER: US/09/820,893
; CURRENT FILING DATE: 2001-03-30
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PRIOR APPLICATION NUMBER: 09/531,119
  PRIOR FILING DATE: 2000-03-20
   PRIOR APPLICATION NUMBER: 60/102,895
  PRIOR FILING DATE: 1998-10-02
  NUMBER OF SEQ ID NOS: 140
  SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 116
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-820-893-116
  Query Match
                         27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
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                                                                     Gaps
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           9 RPR 11
Qу
              III
           3 RPR 5
Db
RESULT 13
US-09-873-676-16
; Sequence 16, Application US/09873676
; Patent No. US20020077289A1
; GENERAL INFORMATION:
; APPLICANT: MacDonald, Nicholas J.
; APPLICANT: Sim, Kim L.
; TITLE OF INVENTION: Angiostatin and Endostatin Binding Proteins and Methods
of Use
; FILE REFERENCE: 05213-0378 (43170-259333)
  CURRENT APPLICATION NUMBER: US/09/873,676
  CURRENT FILING DATE: 2001-06-04
  PRIOR APPLICATION NUMBER: US 60/209,065
  PRIOR FILING DATE: 2000-06-02
  PRIOR APPLICATION NUMBER: US 60/289,387
  PRIOR FILING DATE: 2001-05-08
  NUMBER OF SEQ ID NOS: 123
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 16
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: synthetic binding peptide
US-09-873-676-16
 Query Match
                         27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
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           9 RPR 11
Qу
             III
Db
           3 RPR 5
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RESULT 14

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US-09-976-165-54
; Sequence 54, Application US/09976165
; Patent No. US20020107383A1
; GENERAL INFORMATION:
; APPLICANT: FUJIWARA, TSUTOMU
; APPLICANT: WATANABE, TAKESHI
  APPLICANT: HORIE, MASATO
  TITLE OF INVENTION: AN ISOLATED NUCLEIC ACID MOLECULE ENCODING HUMAN
  TITLE OF INVENTION: SKELETAL MUSCLE-SPECIFIC UBIQUITIN-CONJUGATING ENZYME
  FILE REFERENCE: Q-53599
  CURRENT APPLICATION NUMBER: US/09/976,165
  CURRENT FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: 09/565,538
; PRIOR FILING DATE: 2000-05-05
; PRIOR APPLICATION NUMBER: 09/055,699
 PRIOR FILING DATE: 1998-04-07
  PRIOR APPLICATION NUMBER: 08/820,170
  PRIOR FILING DATE: 1997-03-19
; PRIOR APPLICATION NUMBER: JP 63410/1996
  PRIOR FILING DATE: 1996-03-19
  PRIOR APPLICATION NUMBER: JP 69163/1997
; PRIOR FILING DATE: 1997-03-05
; NUMBER OF SEQ ID NOS: 95
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 54
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Bovine sp.
US-09-976-165-54
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 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
                             0; Mismatches 0; Indels
                                                              0; Gaps
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 Matches 3; Conservative
Qy
          1 ATN 3
             111
           1 ATN 3
Dh
RESULT 15
US-09-736-743A-2
; Sequence 2, Application US/09736743A
; Patent No. US20020110869A1
; GENERAL INFORMATION:
; APPLICANT: KOVESDI, IMRE
; APPLICANT: BRUDER, JOSEPH T
  TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING CHIMERIC PROTEIN AND RELATED
VECTOR, CELL AND
; TITLE OF INVENTION: METHOD OF EXPRESSION
  FILE REFERENCE: 203591
  CURRENT APPLICATION NUMBER: US/09/736,743A
; CURRENT FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
   LENGTH: 11
  TYPE: PRT
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; ORGANISM: Human immunodeficiency virus
US-09-736-743A-2
                         27.3%; Score 3; DB 9; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
           8 RRP 10
Qу
             111
           8 RRP 10
Db
RESULT 16
US-09-753-126-131
; Sequence 131, Application US/09753126
; Patent No. US20020127219A1
; GENERAL INFORMATION:
; APPLICANT: OKKELS, JENS SIGURD
; APPLICANT: JENSEN, ANNE DAM
 APPLICANT: HALKIER, TORBEN
 APPLICANT: JENSEN, RIKKE BOLDING
  TITLE OF INVENTION: IMPROVED LYSOSOMAL ENZYMES AND LYSOSOMAL ENZYME
; TITLE OF INVENTION: ACTIVATORS
; FILE REFERENCE: 31-000600US
  CURRENT APPLICATION NUMBER: US/09/753,126
; CURRENT FILING DATE: 2001-06-11
; PRIOR APPLICATION NUMBER: PA 1999 01891
; PRIOR FILING DATE: 1999-12-30
 PRIOR APPLICATION NUMBER: 60/174,652
  PRIOR FILING DATE: 2000-01-06
  PRIOR APPLICATION NUMBER: PA 200 00865
 PRIOR FILING DATE: 2000-06-02
  PRIOR APPLICATION NUMBER: 60/210,984
  PRIOR FILING DATE: 2000-06-12
 PRIOR APPLICATION NUMBER: 60/211,124
; PRIOR FILING DATE: 2000-06-12
; PRIOR APPLICATION NUMBER: PA 2000 01027
; PRIOR FILING DATE: 2000-06-30
; PRIOR APPLICATION NUMBER: 60/217,497
; PRIOR FILING DATE: 2000-07-11
 NUMBER OF SEQ ID NOS: 147
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 131
  LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
   OTHER INFORMATION: peptide
US-09-753-126-131
                         27.3%; Score 3; DB 9; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
         3; Conservative 0; Mismatches 0; Indels
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                                                                           0;
           2 TNK 4
Qу
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 $\mathbf{I}$ 

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RESULT 17
US-09-753-126-133
; Sequence 133, Application US/09753126
; Patent No. US20020127219A1
; GENERAL INFORMATION:
  APPLICANT: OKKELS, JENS SIGURD
              JENSEN, ANNE DAM
  APPLICANT:
  APPLICANT: HALKIER, TORBEN
  APPLICANT: JENSEN, RIKKE BOLDING
  TITLE OF INVENTION: IMPROVED LYSOSOMAL ENZYMES AND LYSOSOMAL ENZYME
  TITLE OF INVENTION: ACTIVATORS
  FILE REFERENCE: 31-000600US
  CURRENT APPLICATION NUMBER: US/09/753,126
  CURRENT FILING DATE: 2001-06-11
  PRIOR APPLICATION NUMBER: PA 1999 01891
  PRIOR FILING DATE: 1999-12-30
  PRIOR APPLICATION NUMBER: 60/174,652
  PRIOR FILING DATE: 2000-01-06
  PRIOR APPLICATION NUMBER: PA 200 00865
  PRIOR FILING DATE: 2000-06-02
  PRIOR APPLICATION NUMBER: 60/210,984
  PRIOR FILING DATE: 2000-06-12
  PRIOR APPLICATION NUMBER: 60/211,124
  PRIOR FILING DATE: 2000-06-12
  PRIOR APPLICATION NUMBER: PA 2000 01027
  PRIOR FILING DATE: 2000-06-30
  PRIOR APPLICATION NUMBER: 60/217,497
  PRIOR FILING DATE: 2000-07-11
  NUMBER OF SEQ ID NOS: 147
  SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 133
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
   OTHER INFORMATION: peptide
US-09-753-126-133
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative
                              0; Mismatches
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                                                      Indels
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                                                                     Gaps
            1 ATN 3
Qу
              III
Db
            7 ATN 9
RESULT 18
US-09-953-587-31
; Sequence 31, Application US/09953587
; Patent No. US20020142939A1
; GENERAL INFORMATION:
; APPLICANT: CHADA, Kiran K.
```

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APPLICANT: ASHAR, Hena
  APPLICANT: TKACHENKO, Alex
  APPLICANT: ZHOU, Xianjin
  TITLE OF INVENTION: HMGI PROTEINS IN CANCER AND OBESITY
; FILE REFERENCE: 267/110
; CURRENT APPLICATION NUMBER: US/09/953,587
; CURRENT FILING DATE: 2001-09-12
; PRIOR APPLICATION NUMBER: US 08/852,666
; PRIOR FILING DATE: 1997-05-07
; PRIOR APPLICATION NUMBER: US 08/679,529
  PRIOR FILING DATE: 1996-07-12
; PRIOR APPLICATION NUMBER: PCT/US/97/21299
; PRIOR FILING DATE: 1997-11-18
; NUMBER OF SEQ ID NOS: 33
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
    LENGTH: 11
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-953-587-31
  Query Match
                         27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative
                              0; Mismatches
                                                                 0; Gaps
                                                  0; Indels
                                                                             0;
            9 RPR 11
Qу
              | | |
            4 RPR 6
Db
RESULT 19
US-09-250-611-21
; Sequence 21, Application US/09250611
; Patent No. US20020143161A1
; GENERAL INFORMATION:
  APPLICANT: Byrne, Jennifer A.
  APPLICANT: Basset, Paul
  TITLE OF INVENTION: Members of the D52 Gene Family
; FILE REFERENCE: 1383.0210001
; CURRENT APPLICATION NUMBER: US/09/250,611
; CURRENT FILING DATE: 1999-02-17
 NUMBER OF SEQ ID NOS: 108
 SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Homo sapiens
   FEATURE:
   NAME/KEY: UNSURE
   LOCATION: (1)..(2)
   OTHER INFORMATION: May be any amino acid
   FEATURE:
   NAME/KEY: UNSURE
   LOCATION: (8)
   OTHER INFORMATION: May be any amino acid
US-09-250-611-21
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Query Match
                         27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative
                               0; Mismatches
                                                  0: Indels
                                                                0: Gaps
                                                                            0:
           4 KKT 6
Qу
             \Pi
            5 KKT 7
RESULT 20
US-09-839-743-16
; Sequence 16, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
; APPLICANT: The Salk Institute for Biological Sciences
 APPLICANT: Lamb, Christopher
  APPLICANT: Doerner, Peter
  APPLICANT: Laible, Goetz
  TITLE OF INVENTION: No. US20020146824Alel Transcription Enhancer Element and
 TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
; FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
; PRIOR APPLICATION NUMBER: US 09/401,336
; PRIOR FILING DATE: 1999-09-21
; PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/669,721
; PRIOR FILING DATE: 1996-06-27
; NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 16
   LENGTH: 11
    TYPE: PRT
    ORGANISM: Nicotiana tabacum
US-09-839-743-16
 Query Match
                         27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                              0; Gaps
                                                                           0;
           9 RPR 11
Qу
             III
Db
           4 RPR 6
RESULT 21
US-09-839-743-17
; Sequence 17, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
  APPLICANT: The Salk Institute for Biological Sciences
; APPLICANT: Lamb, Christopher
; APPLICANT: Doerner, Peter
; APPLICANT: Laible, Goetz
; TITLE OF INVENTION: No. US20020146824A1el Transcription Enhancer Element and
; TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
```

```
FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
  PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/669,721
  PRIOR FILING DATE: 1996-06-27
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Nicotiana tabacum
US-09-839-743-17
 Query Match
                         27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
                                                                0; Gaps
            3; Conservative
                              0; Mismatches
                                                  0; Indels
                                                                            0;
           9 RPR 11
Qу
             +111
           8 RPR 10
Db
RESULT 22
US-09-839-743-18
; Sequence 18, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
 APPLICANT: The Salk Institute for Biological Sciences
  APPLICANT: Lamb, Christopher
  APPLICANT: Doerner, Peter
  APPLICANT: Laible, Goetz
  TITLE OF INVENTION: No. US20020146824A1el Transcription Enhancer Element and
  TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
  FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
  PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/669,721
  PRIOR FILING DATE: 1996-06-27
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 18
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Nicotiana tabacum
US-09-839-743-18
                         27.3%; Score 3; DB 9; Length 11;
 Query Match
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                            0;
 Matches
```

```
9 RPR 11
Qу
              III
           4 RPR 6
Db
RESULT 23
US-09-839-743-20
; Sequence 20, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
  APPLICANT: The Salk Institute for Biological Sciences
  APPLICANT: Lamb, Christopher
  APPLICANT: Doerner, Peter
  APPLICANT: Laible, Goetz
  TITLE OF INVENTION: No. US20020146824A1el Transcription Enhancer Element and
  TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
  FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
  PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/669,721
  PRIOR FILING DATE: 1996-06-27
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEO ID NO 20
    LENGTH: 11
   TYPE: PRT
    ORGANISM: Nicotiana tabacum
US-09-839-743-20
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
                                 0; Mismatches
                                                                             0;
            3; Conservative
                                                   0; Indels
                                                                 0; Gaps
            8 RRP 10
Qу
              111
Dh
            4 RRP 6
RESULT 24
US-09-839-743-21
; Sequence 21, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
  APPLICANT: The Salk Institute for Biological Sciences
  APPLICANT: Lamb, Christopher
               Doerner, Peter
  APPLICANT:
  APPLICANT:
               Laible, Goetz
  TITLE OF INVENTION: No. US20020146824Alel Transcription Enhancer Element and
  TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
; FILE REFERENCE: SALKINS.008DV3
; CURRENT APPLICATION NUMBER: US/09/839,743
```

; CURRENT FILING DATE: 2001-04-19

```
PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/669,721
 PRIOR FILING DATE: 1996-06-27
; NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 21
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Nicotiana tabacum
US-09-839-743-21
                          27.3%; Score 3; DB 9; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
                              0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                             0;
 Matches
            3; Conservative
            8 RRP 10
Qу
             | | |
           4 RRP 6
Db
RESULT 25
US-09-839-743-22
; Sequence 22, Application US/09839743
; Patent No. US20020146824A1
; GENERAL INFORMATION:
  APPLICANT: The Salk Institute for Biological Sciences
  APPLICANT: Lamb, Christopher
  APPLICANT: Doerner, Peter
  APPLICANT: Laible, Goetz
  TITLE OF INVENTION: No. US20020146824Alel Transcription Enhancer Element and
  TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
  FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
  PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/669,721
  PRIOR FILING DATE: 1996-06-27
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 22
   LENGTH: 11
    TYPE: PRT
    ORGANISM: Nicotiana tabacum
US-09-839-743-22
                          27.3%; Score 3; DB 9; Length 11;
  Query Match
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
                                0; Mismatches
            3; Conservative
                                                  0; Indels
                                                                0; Gaps
                                                                             0;
 Matches
            7 GRR 9
Qу
              111
```

```
RESULT 26
US-09-839-743-23
; Sequence 23, Application US/09839743
 Patent No. US20020146824A1
; GENERAL INFORMATION:
  APPLICANT: The Salk Institute for Biological Sciences
  APPLICANT:
             Lamb, Christopher
  APPLICANT: Doerner, Peter
  APPLICANT: Laible, Goetz
  TITLE OF INVENTION: No. US20020146824A1el Transcription Enhancer Element and
  TITLE OF INVENTION: Transcription Factor and Methods of Use Thereof
  FILE REFERENCE: SALKINS.008DV3
  CURRENT APPLICATION NUMBER: US/09/839,743
  CURRENT FILING DATE: 2001-04-19
  PRIOR APPLICATION NUMBER: US 09/401,336
  PRIOR FILING DATE: 1999-09-21
  PRIOR APPLICATION NUMBER: US 09/189,344
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/669,721
  PRIOR FILING DATE: 1996-06-27
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 23
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Nicotiana tabacum
US-09-839-743-23
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative
                                0; Mismatches 0; Indels
 Matches
                                                                 0; Gaps
                                                                             0;
           7 GRR 9
Qy
              IIII
Db
            4 GRR 6
RESULT 27
US-09-969-192-19
; Sequence 19, Application US/09969192
; Patent No. US20020151027A1
   GENERAL INFORMATION:
        APPLICANT: WICKHAM, THOMAS J.
                    ROELVINK, PETRUS W.
                    KOVESDI, IMRE
        TITLE OF INVENTION: TARGETING ADENOVIRUS WITH USE OF
                             CONSTRAINED PEPTIDE MOTIFS
        NUMBER OF SEQUENCES: 80
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Leydig, Voit & Mayer, Ltd.
             STREET: Two Prudential Plaza - 49th Floor
             CITY: Chicago
             STATE: Illinois
             COUNTRY: USA
```

```
ZIP: 60601
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.30
        CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/969,192
              FILING DATE: 01-Oct-2001
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US 9-455061
              FILING DATE: 06-DEC-1999
              APPLICATION NUMBER: US 9-130225
              FILING DATE: 06-AUG-1998
              APPLICATION NUMBER: US 8-701124
              FILING DATE: 21-AUG-1996
        ATTORNEY/AGENT INFORMATION:
              NAME: Hefner, M. Daniel
              REGISTRATION NUMBER: 41,826
              REFERENCE/DOCKET NUMBER: 213564
   INFORMATION FOR SEQ ID NO: 19:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-09-969-192-19
  Query Match
                          27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            4 KKT 6
Qу
              \mathbf{I}
           8 KKT 10
Db
RESULT 28
US-09-985-936-6
; Sequence 6, Application US/09985936
; Patent No. US20020164696A1
; GENERAL INFORMATION:
  APPLICANT: Stefan KAPPELER
  APPLICANT: Zakaria FARAH
  APPLICANT: Johannes Maarten van den BRINK
  APPLICANT: Henrik RAHBEK-NIELSEN
  APPLICANT: Peter BUDTZ
  TITLE OF INVENTION: Method of producing non-bovine chymosin
  TITLE OF INVENTION: and use hereof
  FILE REFERENCE: KAPPELER=1A
  CURRENT APPLICATION NUMBER: US/09/985,936
  CURRENT FILING DATE: 2001-11-06
; PRIOR APPLICATION NUMBER: US 09/705,917
; PRIOR FILING DATE: 2000-11-06
; NUMBER OF SEO ID NOS: 7
; SOFTWARE: FastSEQ for Windows Version 4.0
```

```
; SEQ ID NO 6
    LENGTH: 11
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Chymosin hydrolizes the peptide bond between
    OTHER INFORMATION: nitrophenylalanine and Ile.
    FEATURE:
   NAME/KEY: VARIANT
    LOCATION: (8)..(8)
    OTHER INFORMATION: Xaa = nitrophenylalanine
US-09-985-936-6
  Query Match
                          27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
  Matches
            3; Conservative
                                 0; Mismatches
                                                                 0; Gaps
                                                                             0;
                                                   0; Indels
Qу
            9 RPR 11
              111
Db
            1 RPR 3
RESULT 29
US-09-955-504-29
; Sequence 29, Application US/09955504
; Publication No. US20020182702A1
; GENERAL INFORMATION:
  APPLICANT: Ruben et al.
  TITLE OF INVENTION: ADAM Polynucleotides, Polypeptides, and Antibodies
  FILE REFERENCE: PT006P2
  CURRENT APPLICATION NUMBER: US/09/955,504
  CURRENT FILING DATE: 2001-09-19
  PRIOR APPLICATION NUMBER: 60/234,222
  PRIOR FILING DATE: 2000-09-21
  PRIOR APPLICATION NUMBER: 09/712,907
  PRIOR FILING DATE: 2000-11-16
  PRIOR APPLICATION NUMBER: PCT/US00/14308
  PRIOR FILING DATE: 2000-05-25
  PRIOR APPLICATION NUMBER: 60/178,717
  PRIOR FILING DATE: 2000-01-28
  PRIOR APPLICATION NUMBER: 60/142,930
  PRIOR FILING DATE: 1999-07-09
  PRIOR APPLICATION NUMBER: 60/136,388
  PRIOR FILING DATE: 1999-05-27
  NUMBER OF SEQ ID NOS: 38
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-955-504-29
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
                         100.0%; Pred. No. 1.2e+04;
 Best Local Similarity
 Matches
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
```

```
RESULT 30
US-09-851-138-109
; Sequence 109, Application US/09851138
; Publication No. US20020183508A1
    GENERAL INFORMATION:
         APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
         TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
         NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
              COUNTRY: USA
              ZIP: 77210-4433
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
              APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
              APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
         ATTORNEY/AGENT INFORMATION:
              NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
   INFORMATION FOR SEQ ID NO: 109:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 109:
US-09-851-138-109
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
             3; Conservative
                              0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
```

8 RRP 10

Qу

```
RESULT 31
US-09-851-138-110
; Sequence 110, Application US/09851138
 Publication No. US20020183508A1
    GENERAL INFORMATION:
        APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
        TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
        NUMBER OF SEQUENCES: 207
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
             CITY: HOUSTON
              STATE: TEXAS
             COUNTRY: USA
              ZIP: 77210-4433
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
             OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/851,138
             FILING DATE: 09-May-2001
         PRIOR APPLICATION DATA:
             APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
             APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
             APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
        ATTORNEY/AGENT INFORMATION:
             NAME: KAMMERER, PATRICIA A.
             REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
   INFORMATION FOR SEQ ID NO: 110:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
             TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 110:
US-09-851-138-110
  Query Match
                          27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           8 RRP 10
Qу
             111
           2 RRP 4
Db
```

```
RESULT 32
US-09-851-138-112
; Sequence 112, Application US/09851138
; Publication No. US20020183508A1
    GENERAL INFORMATION:
        APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
        TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
        NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
             COUNTRY: USA
              ZIP: 77210-4433
         COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
         PRIOR APPLICATION DATA:
             APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
              APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
              APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
        ATTORNEY/AGENT INFORMATION:
              NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
   INFORMATION FOR SEQ ID NO: 112:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 112:
US-09-851-138-112
                          27.3%; Score 3; DB 9; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative
                               0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
  Matches
            6 TGR 8
Qy
              \perp
Db
            5 TGR 7
```

```
RESULT 33
US-09-851-138-114
; Sequence 114, Application US/09851138
; Publication No. US20020183508A1
    GENERAL INFORMATION:
         APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
         TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
         NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
              COUNTRY: USA
              ZIP: 77210-4433
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
              APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
              APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
         ATTORNEY/AGENT INFORMATION:
              NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
    INFORMATION FOR SEQ ID NO: 114:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 114:
US-09-851-138-114
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
             3; Conservative 0; Mismatches 0; Indels
 Matches
                                                                 0; Gaps
                                                                              0;
            6 TGR 8
Qу
              \perp
Db
            5 TGR 7
```

```
RESULT 34
US-09-851-138-115
; Sequence 115, Application US/09851138
 Publication No. US20020183508A1
    GENERAL INFORMATION:
         APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
         TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
        NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
              COUNTRY: USA
              ZIP: 77210-4433
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
        CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
        PRIOR APPLICATION DATA:
             APPLICATION NUMBER: 08/836,075
             FILING DATE: <Unknown>
             APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
             APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
        ATTORNEY/AGENT INFORMATION:
             NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
   INFORMATION FOR SEQ ID NO: 115:
        SEQUENCE CHARACTERISTICS:
             LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
        SEQUENCE DESCRIPTION: SEQ ID NO: 115:
US-09-851-138-115
                         27.3%; Score 3; DB 9; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
           6 TGR 8
Qу
              111
          5 TGR 7
Db
```

```
US-09-851-138-118
; Sequence 118, Application US/09851138
; Publication No. US20020183508A1
    GENERAL INFORMATION:
         APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
         TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
         NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
              COUNTRY: USA
              ZIP: 77210-4433
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
        CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
        PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
             APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
              APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
        ATTORNEY/AGENT INFORMATION:
              NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
   INFORMATION FOR SEQ ID NO: 118:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 118:
US-09-851-138-118
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0:
           6 TGR 8
Qу
              | | |
Db
           5 TGR 7
```

RESULT 36 US-09-851-138-119

```
; Sequence 119, Application US/09851138
  Publication No. US20020183508A1
    GENERAL INFORMATION:
         APPLICANT: MAERTENS, GEERT
                    STUYVER, LIEVEN
         TITLE OF INVENTION: NEW SEQUENCES OF HEPATITIS C VIRUS GENOTYPES
                             AND THEIR USE AS PROPHYLACTIC, THERAPEUTIC AND
DIAGNOSTIC
                             AGENTS
         NUMBER OF SEQUENCES: 207
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: ARNOLD, WHITE & DURKEE
              STREET: P.O. BOX 4433
              CITY: HOUSTON
              STATE: TEXAS
              COUNTRY: USA
              ZIP: 77210-4433
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: Microsoft Word 6.0 / ASCII text output
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/851,138
              FILING DATE: 09-May-2001
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/836,075
              FILING DATE: <Unknown>
              APPLICATION NUMBER: EP 94870166.9
              FILING DATE: 21 Oct 1994
              APPLICATION NUMBER: EP 95870076.7
              FILING DATE: 28 Jun 1995
        ATTORNEY/AGENT INFORMATION:
              NAME: KAMMERER, PATRICIA A.
              REGISTRATION NUMBER: 29,775
              REFERENCE/DOCKET NUMBER: INNS:004
    INFORMATION FOR SEQ ID NO: 119:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
             TYPE: amino acid
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 119:
US-09-851-138-119
 Query Match
                          27.3%; Score 3; DB 9; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
          3; Conservative 0; Mismatches
                                                   0; Indels
                                                                     Gaps
                                                                             0;
           6 TGR 8
Qу
              5 TGR 7
Db
RESULT 37
US-09-880-505-7
; Sequence 7, Application US/09880505
```

```
; Publication No. US20030007976A1
; GENERAL INFORMATION:
  APPLICANT: Watson, James D.
  APPLICANT: Tan, Paul L.J.
  APPLICANT: Prestidge, Ross
  TITLE OF INVENTION: Methods and Compounds for the Treatment
  TITLE OF INVENTION: of Immunologically-Mediated Skin Disorders
  FILE REFERENCE: 11000.1007c2
  CURRENT APPLICATION NUMBER: US/09/880,505
  CURRENT FILING DATE: 2001-06-13
  PRIOR APPLICATION NUMBER: US 09/324,542
  PRIOR FILING DATE: 1999-06-02
  PRIOR APPLICATION NUMBER: US 08/997,080
  PRIOR FILING DATE: 1997-12-23
  NUMBER OF SEQ ID NOS: 194
  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 7
   LENGTH: 11
    TYPE: PRT
    ORGANISM: Mycobacterium vaccae
US-09-880-505-7
 Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                            0;
 Matches
           6 TGR 8
Qу
             Db
           9 TGR 11
RESULT 38
US-09-999-724-76
; Sequence 76, Application US/09999724
; Publication No. US20030022355A1
; GENERAL INFORMATION:
  APPLICANT: WICKHAM, THOMAS J.
  APPLICANT: KOVESDI, IMRE
  APPLICANT: BROUGH, DOUGLAS E.
  TITLE OF INVENTION: VECTORS AND METHODS FOR GENE TRANSFER
  FILE REFERENCE: 212960
  CURRENT APPLICATION NUMBER: US/09/999,724
  CURRENT FILING DATE: 2001-10-24
  PRIOR APPLICATION NUMBER: US 09/101,751
  PRIOR FILING DATE: 1999-01-29
  PRIOR APPLICATION NUMBER: WO 96US19150
  PRIOR FILING DATE: 1996-11-27
  PRIOR APPLICATION NUMBER: US 08/700,846
  PRIOR FILING DATE: 1996-08-21
  PRIOR APPLICATION NUMBER: US 08/701,124
  PRIOR FILING DATE: 1996-08-21
  PRIOR APPLICATION NUMBER: US 08/563,368
  PRIOR FILING DATE: 1995-11-28
; NUMBER OF SEQ ID NOS: 94
; SOFTWARE: PatentIn Ver. 2.1
; SEO ID NO 76
  LENGTH: 11
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TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Synthetic
US-09-999-724-76
 Query Match
                          27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
                                0; Mismatches
                                                                 0; Gaps
                                                                             0;
 Matches
            3; Conservative
                                                   0;
                                                      Indels
Qу
            4 KKT 6
              111
Db
            8 KKT 10
RESULT 39
US-09-948-193-20
; Sequence 20, Application US/09948193
; Publication No. US20030027335A1
; GENERAL INFORMATION:
  APPLICANT: Ruley, H. Earl
  APPLICANT:
              Jo, Daewoong
  TITLE OF INVENTION: Genome Engineering by Cell-Permeable DNA
  TITLE OF INVENTION: Site-Specific Recombinases
  FILE REFERENCE: 22000.0109U2
  CURRENT APPLICATION NUMBER: US/09/948,193
  CURRENT FILING DATE: 2001-09-07
  PRIOR APPLICATION NUMBER: 60/230,690
  PRIOR FILING DATE: 2000-09-07
  NUMBER OF SEQ ID NOS: 21
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEO ID NO 20
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Human Immunodeficiency Virus
   FEATURE:
   OTHER INFORMATION: Description: MTS from HIV Tat
US-09-948-193-20
 Query Match
                          27.3%; Score 3; DB 10; Length 11;
                         100.0%; Pred. No. 1.2e+04;
 Best Local Similarity
 Matches
            3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
            6 TGR 8
Qy
              \perp
Db
           1 TGR 3
RESULT 40
US-09-791-393-264
; Sequence 264, Application US/09791393
; Publication No. US20030032200A1
; GENERAL INFORMATION:
; APPLICANT: Herath, Herath Mudiyanselage Athula Chandrasiri
 APPLICANT: Parekh, Rajesh Bhikhu
; APPLICANT: Rohlff, Christian
; TITLE OF INVENTION: Proteins, Genes and Their Use for
```

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; TITLE OF INVENTION: Diagnosis and Treatment of Bipolar Affective Disorder
(BAD)
; TITLE OF INVENTION: and Unipolar Depression
  FILE REFERENCE: 2543-1-001 N1
  CURRENT APPLICATION NUMBER: US/09/791,393
  CURRENT FILING DATE: 2002-01-02
; EARLIER APPLICATION NUMBER: GB 0004412.3
; EARLIER FILING DATE: 2000-02-24
; EARLIER APPLICATION NUMBER: GB 0030050.9
; EARLIER FILING DATE: 2000-12-08
; EARLIER APPLICATION NUMBER: US 60/254,830
; EARLIER FILING DATE: 2000-12-12
; NUMBER OF SEQ ID NOS: 308
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 264
   LENGTH: 11
   TYPE: PRT
    ORGANISM: homo sapien
US-09-791-393-264
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
           6 TGR 8
Qу
             \perp
           9 TGR 11
Db
RESULT 41
US-09-988-792-8
; Sequence 8, Application US/09988792
; Publication No. US20030032599A1
; GENERAL INFORMATION:
 APPLICANT: Lipkowski, Andrezej W
  APPLICANT: Carr, Daniel B
  TITLE OF INVENTION: NOVEL ANTIMICROBIAL COMPOUNDS
  FILE REFERENCE: 18475-025
; CURRENT APPLICATION NUMBER: US/09/988,792
 CURRENT FILING DATE: 2001-11-20
; PRIOR APPLICATION NUMBER: 60/252,369
; PRIOR FILING DATE: 2000-11-21
; NUMBER OF SEQ ID NOS: 14
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 8
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Gallus gallus
US-09-988-792-8
 Query Match
                         27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
           9 RPR 11
Qу
             -111
Db
           1 RPR 3
```

```
RESULT 42
US-09-791-389-264
; Sequence 264, Application US/09791389
; Publication No. US20030032773A1
; GENERAL INFORMATION:
  APPLICANT: Herath, Herath Mudiyanselage Athula Chandrasiri
  APPLICANT: Parekh, Rajesh Bhikhu
  APPLICANT: Rohlff, Christian
  APPLICANT: Terrett, Jonathan Alexander
 APPLICANT: Tyson, Kerry Louise
  TITLE OF INVENTION: Proteins, Genes and Their Use for
  TITLE OF INVENTION: Diagnosis and Treatment of Bipolar Affective Disorder
(BAD)
  TITLE OF INVENTION: and Unipolar Depression
  FILE REFERENCE: 2543-1-001 N2
  CURRENT APPLICATION NUMBER: US/09/791,389
  CURRENT FILING DATE: 2001-02-23
 PRIOR APPLICATION NUMBER: GB 0004412.3
; PRIOR FILING DATE: 2000-02-24
  PRIOR APPLICATION NUMBER: GB 0030050.9
  PRIOR FILING DATE: 2000-12-08
  PRIOR APPLICATION NUMBER: US 60/254,830
 PRIOR FILING DATE: 2000-12-12
; NUMBER OF SEQ ID NOS: 308
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 264
   LENGTH: 11
   TYPE: PRT
    ORGANISM: homo sapien
US-09-791-389-264
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           6 TGR 8
Qу
             -111
           9 TGR 11
Db
RESULT 43
US-09-896-896A-95
; Sequence 95, Application US/09896896A
; Publication No. US20030036181A1
; GENERAL INFORMATION:
; APPLICANT: MAXYGEN APS
  TITLE OF INVENTION: PEPTIDE EXTENDED GLYCOSYLATED POLYPEPTIDES
  FILE REFERENCE: 0217us210
  CURRENT APPLICATION NUMBER: US/09/896,896A
  CURRENT FILING DATE: 2001-06-29
  PRIOR APPLICATION NUMBER: US 60/217,497
  PRIOR FILING DATE: 2000-07-11
; PRIOR APPLICATION NUMBER: US 60/225,558
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: DK PA 2000 01027
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PRIOR FILING DATE: 2000-06-30
  PRIOR APPLICATION NUMBER: DK PA 2000 01092
  PRIOR FILING DATE: 2000-07-14
; PRIOR APPLICATION NUMBER: PCT/DK00/00743
; PRIOR FILING DATE: 2000-12-29
; PRIOR APPLICATION NUMBER: PCT/DK01/00090
; PRIOR FILING DATE: 2001-02-09
; NUMBER OF SEQ ID NOS: 123
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 95
  LENGTH: 11
   TYPE: PRT
  ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
   OTHER INFORMATION: peptide
US-09-896-896A-95
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
           2 TNK 4
             \Box\Box
Db
          8 TNK 10
RESULT 44
US-09-896-896A-97
; Sequence 97, Application US/09896896A
; Publication No. US20030036181A1
; GENERAL INFORMATION:
; APPLICANT: MAXYGEN APS
; TITLE OF INVENTION: PEPTIDE EXTENDED GLYCOSYLATED POLYPEPTIDES
; FILE REFERENCE: 0217us210
  CURRENT APPLICATION NUMBER: US/09/896,896A
  CURRENT FILING DATE: 2001-06-29
; PRIOR APPLICATION NUMBER: US 60/217,497
; PRIOR FILING DATE: 2000-07-11
; PRIOR APPLICATION NUMBER: US 60/225,558
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: DK PA 2000 01027
 PRIOR FILING DATE: 2000-06-30
  PRIOR APPLICATION NUMBER: DK PA 2000 01092
  PRIOR FILING DATE: 2000-07-14
  PRIOR APPLICATION NUMBER: PCT/DK00/00743
  PRIOR FILING DATE: 2000-12-29
  PRIOR APPLICATION NUMBER: PCT/DK01/00090
  PRIOR FILING DATE: 2001-02-09
  NUMBER OF SEQ ID NOS: 123
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 97
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
  OTHER INFORMATION: Description of Artificial Sequence: Synthetic
```

```
; OTHER INFORMATION: peptide
US-09-896-896A-97
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
Qу
           1 ATN 3
             7 ATN 9
Db
RESULT 45
US-09-226-402-31
; Sequence 31, Application US/09226402
; Publication No. US20030051260A1
  GENERAL INFORMATION:
    APPLICANT: Chada, Kiran K.
    APPLICANT: Ashar, Hena
    APPLICANT: Tkachenko, Alex
    APPLICANT: Zhou, Xianjin
    TITLE OF INVENTION: HMGI Proteins in Cancer and Obesity
    NUMBER OF SEQUENCES: 32
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Richard R. Muccino
      STREET: 758 Springfield Avenue
      CITY: Summit
      STATE: New Jersey
      COUNTRY: USA
      ZIP: 07901
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC DOS/MS DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/226,402
      FILING DATE: 06 JAN 1999
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
     NAME: Muccino, Richard R.
      REGISTRATION NUMBER: 32,538
     REFERENCE/DOCKET NUMBER: UMD1 037CIPCIP
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (908) 273 4988
      TELEFAX: (908) 273 4679
  INFORMATION FOR SEQ ID NO: 31:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: unknown
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
US-09-226-402-31
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27.3%; Score 3; DB 10; Length 11;

Query Match

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Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
           9 RPR 11
Qу
             Db
          4 RPR 6
RESULT 46
US-09-876-904A-38
; Sequence 38, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
; APPLICANT: BOULIKAS, TENI
  TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
; FILE REFERENCE: TB-2002.00
; CURRENT APPLICATION NUMBER: US/09/876,904A
; CURRENT FILING DATE: 2001-06-08
; PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
  LENGTH: 11
  TYPE: PRT
  ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic Adenovirus
   OTHER INFORMATION: type 2/5 Ela peptide
US-09-876-904A-38
                         27.3%; Score 3; DB 10; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
           9 RPR 11
             | | | |
          8 RPR 10
Db
RESULT 47
US-09-876-904A-62
; Sequence 62, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
 APPLICANT: BOULIKAS, TENI
  TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
; FILE REFERENCE: TB-2002.00
; CURRENT APPLICATION NUMBER: US/09/876,904A
```

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CURRENT FILING DATE: 2001-06-08
  PRIOR APPLICATION NUMBER: US 60/210,925
  PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 62
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic Adenovirus
type
   OTHER INFORMATION: 2/5 Ela peptide
US-09-876-904A-62
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
           3; Conservative
                               0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           9 RPR 11
Qу
             +
           8 RPR 10
Db
RESULT 48
US-09-876-904A-111
; Sequence 111, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
; APPLICANT: BOULIKAS, TENI
 TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
  TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
  FILE REFERENCE: TB-2002.00
  CURRENT APPLICATION NUMBER: US/09/876,904A
; CURRENT FILING DATE: 2001-06-08
; PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 111
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic HIV Tat
US-09-876-904A-111
                         27.3%; Score 3; DB 10; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative
                              0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           8 RRP 10
Qv
             \perp \perp \perp
```

```
RESULT 49
US-09-876-904A-113
; Sequence 113, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
  APPLICANT: BOULIKAS, TENI
  TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
; FILE REFERENCE: TB-2002.00
  CURRENT APPLICATION NUMBER: US/09/876,904A
  CURRENT FILING DATE: 2001-06-08
  PRIOR APPLICATION NUMBER: US 60/210,925
  PRIOR FILING DATE: 2000-06-09
  NUMBER OF SEQ ID NOS: 629
  SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 113
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic c-Myc and
HTV
   OTHER INFORMATION: Tat NLSs
US-09-876-904A-113
 Query Match
                          27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
                              0; Mismatches 0; Indels
            3; Conservative
                                                                 0; Gaps
                                                                             0;
            8 RRP 10
Qу
              \mathbf{H}
Db
            9 RRP 11
RESULT 50
US-09-876-904A-239
; Sequence 239, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
; APPLICANT: BOULIKAS, TENI
; TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
  TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
  FILE REFERENCE: TB-2002.00
  CURRENT APPLICATION NUMBER: US/09/876,904A
  CURRENT FILING DATE: 2001-06-08
; PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
```

```
SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 239
    LENGTH: 11
    TYPE: PRT
    ORGANISM: Unknown Organism
    FEATURE:
    OTHER INFORMATION: Description of Unknown Organism: Hydrophilic protein
US-09-876-904A-239
  Query Match
                          27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
  Matches
            3; Conservative
                                0; Mismatches
                                                   0;
                                                      Indels
                                                                 0; Gaps
                                                                             0;
Qу
            4 KKT 6
              \mathbf{I}
            4 KKT 6
RESULT 51
US-09-876-904A-246
; Sequence 246, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
  APPLICANT: BOULIKAS, TENI
   TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
  FILE REFERENCE: TB-2002.00
  CURRENT APPLICATION NUMBER: US/09/876,904A
  CURRENT FILING DATE: 2001-06-08
  PRIOR APPLICATION NUMBER: US 60/210,925
  PRIOR FILING DATE: 2000-06-09
  NUMBER OF SEQ ID NOS: 629
  SOFTWARE: PatentIn Ver. 2.1
 SEO ID NO 246
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Unknown Organism
   OTHER INFORMATION: Description of Unknown Organism: mismatch repair peptide
US-09-876-904A-246
  Query Match
                          27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
           7 GRR 9
Qу
              111
           2 GRR 4
Dh
RESULT 52
US-09-876-904A-354
; Sequence 354, Application US/09876904A
; Publication No. US20030072794A1
```

```
; GENERAL INFORMATION:
 APPLICANT: BOULIKAS, TENI
 TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
  TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
  FILE REFERENCE: TB-2002.00
; CURRENT APPLICATION NUMBER: US/09/876,904A
; CURRENT FILING DATE: 2001-06-08
  PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
 SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 354
   LENGTH: 11
   TYPE: PRT
  ORGANISM: Homo sapiens
   FEATURE:
    OTHER INFORMATION: Human ATF-3 (in basic region that binds DNA)
US-09-876-904A-354
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
           3 NKK 5
Qу
             \perp
           5 NKK 7
Db
RESULT 53
US-09-876-904A-389
; Sequence 389, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
  APPLICANT: BOULIKAS, TENI
  TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
; TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
; FILE REFERENCE: TB-2002.00
; CURRENT APPLICATION NUMBER: US/09/876,904A
  CURRENT FILING DATE: 2001-06-08
; PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 389
  LENGTH: 11
   TYPE: PRT
   ORGANISM: Caenorhabditis elegans
   FEATURE:
   OTHER INFORMATION: C. elegans Sdc-3 protein.
US-09-876-904A-389
```

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Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative
                               0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
          4 KKT 6
Qу
             Db
           9 KKT 11
RESULT 54
US-09-876-904A-436
; Sequence 436, Application US/09876904A
; Publication No. US20030072794A1
; GENERAL INFORMATION:
; APPLICANT: BOULIKAS, TENI
  TITLE OF INVENTION: ENCAPSULATION OF PLASMID DNA (LIPOGENES TM) AND
THERAPEUTIC
; TITLE OF INVENTION: AGENTS WITH NUCLEAR LOCALIZATION SIGNAL/FUSOGENIC
PEPTIDE
  TITLE OF INVENTION: CONJUGATES INTO TARGETED LIPOSOME COMPLEXES
  FILE REFERENCE: TB-2002.00
 CURRENT APPLICATION NUMBER: US/09/876,904A
 CURRENT FILING DATE: 2001-06-08
; PRIOR APPLICATION NUMBER: US 60/210,925
; PRIOR FILING DATE: 2000-06-09
; NUMBER OF SEQ ID NOS: 629
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 436
  LENGTH: 11
   TYPE: PRT
   ORGANISM: Caenorhabditis elegans
   OTHER INFORMATION: C. elegans sex-determining Tra-1 protein.
US-09-876-904A-436
 Query Match
                         27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                          0;
           7 GRR 9
Qу
             -111
           4 GRR 6
RESULT 55
US-09-852-910-160
; Sequence 160, Application US/09852910
; Publication No. US20030096297A1
; GENERAL INFORMATION:
; APPLICANT: Hamm, Heidi
 APPLICANT: Gilchrist, Annette
 TITLE OF INVENTION: Method For Identifying Inhibitors of G Protein Coupled
Receptor Signaling
; FILE REFERENCE: 2661-101
; CURRENT APPLICATION NUMBER: US/09/852,910
; CURRENT FILING DATE: 2001-09-18
; PRIOR APPLICATION NUMBER: US 60/275,472
```

```
PRIOR FILING DATE: 2001-03-14
  NUMBER OF SEQ ID NOS: 271
  SOFTWARE: PatentIn version 3.0
 SEQ ID NO 160
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   NAME/KEY: misc feature
   LOCATION: (1)..(11)
   OTHER INFORMATION: G alpha t library peptide
US-09-852-910-160
 Query Match
                          27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
           3; Conservative
                                0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 NKK 5
             \mathbf{I}
Db
            4 NKK 6
RESULT 56
US-09-852-910-189
; Sequence 189, Application US/09852910
; Publication No. US20030096297A1
; GENERAL INFORMATION:
  APPLICANT: Hamm, Heidi
  APPLICANT: Gilchrist, Annette
  TITLE OF INVENTION: Method For Identifying Inhibitors of G Protein Coupled
Receptor Signaling
  FILE REFERENCE: 2661-101
  CURRENT APPLICATION NUMBER: US/09/852,910
  CURRENT FILING DATE: 2001-09-18
  PRIOR APPLICATION NUMBER: US 60/275,472
  PRIOR FILING DATE: 2001-03-14
  NUMBER OF SEQ ID NOS: 271
 SOFTWARE: PatentIn version 3.0
; SEQ ID NO 189
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   NAME/KEY: misc_feature
   LOCATION: (1)..(11)
   OTHER INFORMATION: Gs library peptide
US-09-852-910-189
                          27.3%; Score 3; DB 10; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
            9 RPR 11
Qу
             +11
Db
            2 RPR 4
```

```
RESULT 57
US-09-852-910-192
; Sequence 192, Application US/09852910
; Publication No. US20030096297A1
; GENERAL INFORMATION:
; APPLICANT: Hamm, Heidi
; APPLICANT: Gilchrist, Annette
  TITLE OF INVENTION: Method For Identifying Inhibitors of G Protein Coupled
Receptor Signaling
; FILE REFERENCE: 2661-101
  CURRENT APPLICATION NUMBER: US/09/852,910
; CURRENT FILING DATE: 2001-09-18
; PRIOR APPLICATION NUMBER: US 60/275,472
; PRIOR FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 271
  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 192
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
  NAME/KEY: misc feature
   LOCATION: (1)..(11)
   OTHER INFORMATION: Gs library peptide
US-09-852-910-192
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
 Matches
           3; Conservative
                              0; Mismatches 0; Indels
                                                                0;
                                                                    Gaps
                                                                            0;
           8 RRP 10
Qy
             IIII
           5 RRP 7
RESULT 58
US-09-954-385-283
; Sequence 283, Application US/09954385
; Publication No. US20030100467A1
; GENERAL INFORMATION:
; APPLICANT: Aehle, Wolfgang
; APPLICANT: Baldwin, Toby L.
; APPLICANT: Van Gastel, Franciscus J.C.
  APPLICANT:
              Janssen, Giselle G.
  APPLICANT: Murray, Christopher J.
; APPLICANT: Wang, Huaming
; APPLICANT: Winetzky, Deborah S.
  TITLE OF INVENTION: Binding Phenol Oxidizing Enzyme-peptide
  TITLE OF INVENTION: Complexes
  FILE REFERENCE: GC690
  CURRENT APPLICATION NUMBER: US/09/954,385
  CURRENT FILING DATE: 2001-09-12
  NUMBER OF SEQ ID NOS: 433
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 283
   LENGTH: 11
   TYPE: PRT
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ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: binding peptide
US-09-954-385-283
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches
                                                0; Indels
                                                               0; Gaps
                                                                            0:
           5 KTG 7
Qу
             | | | |
Db
           4 KTG 6
RESULT 59
US-09-791-524-62
; Sequence 62, Application US/09791524
; Publication No. US20030143209A1
; GENERAL INFORMATION:
  APPLICANT: Aventis Pharmaceuticals Products Inc.
  TITLE OF INVENTION:
                        Targeted Adenovirus Vectors For Delivery Of
Heterologous Genes
; FILE REFERENCE:
                    A3319A
  CURRENT APPLICATION NUMBER: US/09/791,524
  CURRENT FILING DATE: 2001-02-22
; PRIOR APPLICATION NUMBER: 60/09828
; PRIOR FILING DATE: 1998-08-27
; NUMBER OF SEQ ID NOS: 150
  SOFTWARE:
              PatentIn version 3.0
; SEQ ID NO 62
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Adenovirus
US-09-791-524-62
 Query Match
                         27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                           0;
           2 TNK 4
Qy
             -111
Db
           7 TNK 9
RESULT 60
US-09-791-524-109
; Sequence 109, Application US/09791524
; Publication No. US20030143209A1
; GENERAL INFORMATION:
  APPLICANT: Aventis Pharmaceuticals Products Inc.
  TITLE OF INVENTION:
                        Targeted Adenovirus Vectors For Delivery Of
Heterologous Genes
; FILE REFERENCE:
                    A3319A
  CURRENT APPLICATION NUMBER: US/09/791,524
; CURRENT FILING DATE: 2001-02-22
; PRIOR APPLICATION NUMBER:
                              60/09828
; PRIOR FILING DATE:
                       1998-08-27
```

```
NUMBER OF SEQ ID NOS:
                           150
  SOFTWARE:
               PatentIn version 3.0
 SEQ ID NO 109
    LENGTH: 11
    TYPE: PRT
    ORGANISM: Adenovirus
US-09-791-524-109
  Query Match
                          27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
            3; Conservative
                              0; Mismatches 0;
                                                      Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 TNK 4
              \mathbf{I}
Db
            7 TNK 9
RESULT 61
US-09-940-316B-35
; Sequence 35, Application US/09940316B
; Publication No. US20030175901A1
; GENERAL INFORMATION:
  APPLICANT: KOSAN BIOSCIENCES, Inc.
  APPLICANT: REEVES, CHRISTOPHER
  APPLICANT: CHU, DANIEL
  APPLICANT: KHOSLA, CHAITAN
  APPLICANT: SANTI, DANIEL
  APPLICANT: WU, KAI
  TITLE OF INVENTION: POLYKETIDES ENCODING THE fkbA GENE OF THE FK-520
POLYKETIDE SYNTHASE
  TITLE OF INVENTION: GENE CLUSTER
  FILE REFERENCE: 30062-20026.11
  CURRENT APPLICATION NUMBER: US/09/940,316B
  CURRENT FILING DATE: 2001-08-27
  PRIOR APPLICATION NUMBER: 09/410,551
  PRIOR FILING DATE: 1999-10-01
  PRIOR APPLICATION NUMBER: US 60/139,650
  PRIOR FILING DATE: 1999-06-17
  PRIOR APPLICATION NUMBER: US 60/123,810
  PRIOR FILING DATE: 1999-03-11
  PRIOR APPLICATION NUMBER: US 60/102,748
  PRIOR FILING DATE: 1998-10-02
  NUMBER OF SEQ ID NOS: 72
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 35
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic PKS
    OTHER INFORMATION: synthase fragment
US-09-940-316B-35
 Query Match
                         27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0:
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```
9 RPR 11
Qу
              Db
            2 RPR 4
RESULT 62
US-09-940-316B-39
; Sequence 39, Application US/09940316B
; Publication No. US20030175901A1
; GENERAL INFORMATION:
  APPLICANT: KOSAN BIOSCIENCES, Inc.
  APPLICANT: REEVES, CHRISTOPHER
  APPLICANT: CHU, DANIEL
  APPLICANT: KHOSLA, CHAITAN
  APPLICANT: SANTI, DANIEL
  APPLICANT: WU, KAI
  TITLE OF INVENTION: POLYKETIDES ENCODING THE fkbA GENE OF THE FK-520
POLYKETIDE SYNTHASE
  TITLE OF INVENTION: GENE CLUSTER
  FILE REFERENCE: 30062-20026.11
; CURRENT APPLICATION NUMBER: US/09/940,316B
  CURRENT FILING DATE: 2001-08-27
; PRIOR APPLICATION NUMBER: 09/410,551
; PRIOR FILING DATE: 1999-10-01
  PRIOR APPLICATION NUMBER: US 60/139,650
  PRIOR FILING DATE: 1999-06-17
  PRIOR APPLICATION NUMBER: US 60/123,810
  PRIOR FILING DATE: 1999-03-11
; PRIOR APPLICATION NUMBER: US 60/102,748
; PRIOR FILING DATE: 1998-10-02
; NUMBER OF SEQ ID NOS: 72
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 39
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic PKS
   OTHER INFORMATION: synthase fragment
US-09-940-316B-39
  Query Match
                         27.3%; Score 3; DB 10; Length 11;
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           8 RRP 10
Qу
             | | |
           5 RRP 7
Db
RESULT 63
US-09-940-316B-41
; Sequence 41, Application US/09940316B
; Publication No. US20030175901A1
; GENERAL INFORMATION:
```

; APPLICANT: KOSAN BIOSCIENCES, Inc. ; APPLICANT: REEVES, CHRISTOPHER

```
; APPLICANT: CHU, DANIEL
; APPLICANT: KHOSLA, CHAITAN
; APPLICANT: SANTI, DANIEL
; APPLICANT: WU, KAI
; TITLE OF INVENTION: POLYKETIDES ENCODING THE fkba gene of the FK-520
POLYKETIDE SYNTHASE
 TITLE OF INVENTION: GENE CLUSTER
 FILE REFERENCE: 30062-20026.11
  CURRENT APPLICATION NUMBER: US/09/940,316B
  CURRENT FILING DATE: 2001-08-27
; PRIOR APPLICATION NUMBER: 09/410,551
; PRIOR FILING DATE: 1999-10-01
 PRIOR APPLICATION NUMBER: US 60/139,650
 PRIOR FILING DATE: 1999-06-17
  PRIOR APPLICATION NUMBER: US 60/123,810
  PRIOR FILING DATE: 1999-03-11
  PRIOR APPLICATION NUMBER: US 60/102,748
  PRIOR FILING DATE: 1998-10-02
  NUMBER OF SEQ ID NOS: 72
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 41
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic PKS
   OTHER INFORMATION: synthase fragment
US-09-940-316B-41
 Query Match
                        27.3%; Score 3; DB 10; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
           9 RPR 11
QУ
             111
           2 RPR 4
Db
RESULT 64
US-09-940-316B-53
; Sequence 53, Application US/09940316B
; Publication No. US20030175901A1
; GENERAL INFORMATION:
; APPLICANT: KOSAN BIOSCIENCES, Inc.
; APPLICANT: REEVES, CHRISTOPHER
; APPLICANT: CHU, DANIEL
 APPLICANT: KHOSLA, CHAITAN
 APPLICANT: SANTI, DANIEL
 APPLICANT: WU, KAI
 TITLE OF INVENTION: POLYKETIDES ENCODING THE fkbA GENE OF THE FK-520
POLYKETIDE SYNTHASE
; TITLE OF INVENTION: GENE CLUSTER
  FILE REFERENCE: 30062-20026.11
; CURRENT APPLICATION NUMBER: US/09/940,316B
; CURRENT FILING DATE: 2001-08-27
; PRIOR APPLICATION NUMBER: 09/410,551
; PRIOR FILING DATE: 1999-10-01
```

```
PRIOR APPLICATION NUMBER: US 60/139,650
  PRIOR FILING DATE: 1999-06-17
  PRIOR APPLICATION NUMBER: US 60/123,810
  PRIOR FILING DATE: 1999-03-11
  PRIOR APPLICATION NUMBER: US 60/102,748
  PRIOR FILING DATE: 1998-10-02
  NUMBER OF SEQ ID NOS: 72
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 53
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic PKS
    OTHER INFORMATION: synthase fragment
US-09-940-316B-53
                         27.3%; Score 3; DB 10; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative
                                0; Mismatches
                                                   0;
                                                      Indels
                                                                 0; Gaps
                                                                             0;
           9 RPR 11
Qу
              111
           2 RPR 4
Db
RESULT 65
US-09-933-780C-10
; Sequence 10, Application US/09933780C
; Publication No. US20030229202A1
; GENERAL INFORMATION:
  APPLICANT: AVENTIS PHARMACEUTICALS INC.
  APPLICANT: GUO, Yong
  APPLICANT: MORSE, Clarence C
  APPLICANT: YAO, Zhengbin
  TITLE OF INVENTION: MEMBRANE PENETRATING PEPTIDES AND USES THEREOF
  FILE REFERENCE: HMR2053 PCT
  CURRENT APPLICATION NUMBER: US/09/933,780C
  CURRENT FILING DATE: 2001-08-21
  PRIOR APPLICATION NUMBER: US 60/227,647
  PRIOR FILING DATE: 2000-08-25
  PRIOR APPLICATION NUMBER: GB 0103110.3
  PRIOR FILING DATE: 2001-02-07
  NUMBER OF SEQ ID NOS: 54
  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 10
   LENGTH: 11
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Sequence of intracellular loop of 5HT2A receptor
US-09-933-780C-10
  Query Match
                          27.3%; Score 3; DB 11; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
```

```
1 ATN 3
Qy
             9 ATN 11
Db
RESULT 66
US-10-406-031-29
; Sequence 29, Application US/10406031
; Publication No. US20040043017A1
; GENERAL INFORMATION:
; APPLICANT: Masci, Paul Pantaleone
 APPLICANT: De Jersey, John
  APPLICANT: Lavin, Martin
  TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
 FILE REFERENCE: 15685-002001
  CURRENT APPLICATION NUMBER: US/10/406,031
  CURRENT FILING DATE: 2003-04-02
  PRIOR APPLICATION NUMBER: AU 2003901033
; PRIOR FILING DATE: 2003-03-07
 PRIOR APPLICATION NUMBER: AU PS1483
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 51
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
  LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
  NAME/KEY: VARIANT
   LOCATION: 1
   OTHER INFORMATION: Xaa = any amino acid residue
   OTHER INFORMATION: Synthetically generated peptide
US-10-406-031-29
 Query Match
                         27.3%; Score 3; DB 12; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                                           0;
                                                               0; Gaps
Qу
           6 TGR 8
             111
           8 TGR 10
Db
RESULT 67
US-10-398-104-159
; Sequence 159, Application US/10398104
; Publication No. US20040047880A1
; GENERAL INFORMATION:
  APPLICANT: De Bolle, Xavier Thomas
  APPLICANT: Letesson, Jean-Jacques
  APPLICANT: Lobet, Yves
; APPLICANT: Mertens, Pascal Yvon
; APPLICANT: Poolman, Jan
; APPLICANT: Voet, Pierre
; TITLE OF INVENTION: COMPONENT FOR VACCINE
```

; FILE REFERENCE: B45242

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CURRENT APPLICATION NUMBER: US/10/398,104
  CURRENT FILING DATE: 2003-01-04
  PRIOR APPLICATION NUMBER: PCT/EP01/11409
  PRIOR FILING DATE: 2001-10-03
  PRIOR APPLICATION NUMBER: GB 0024200.8
  PRIOR FILING DATE: 2000-10-03
; NUMBER OF SEO ID NOS: 352
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 159
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: LOS peptide mimotope sequence
US-10-398-104-159
  Query Match
                         27.3%; Score 3; DB 12; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches
            3; Conservative
                              0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
           7 GRR 9
Qу
             8 GRR 10
Db
RESULT 68
US-10-398-104-267
; Sequence 267, Application US/10398104
; Publication No. US20040047880A1
; GENERAL INFORMATION:
 APPLICANT: De Bolle, Xavier Thomas
  APPLICANT: Letesson, Jean-Jacques
  APPLICANT: Lobet, Yves
  APPLICANT: Mertens, Pascal Yvon
              Poolman, Jan
  APPLICANT:
  APPLICANT: Voet, Pierre
  TITLE OF INVENTION: COMPONENT FOR VACCINE
; FILE REFERENCE: B45242
; CURRENT APPLICATION NUMBER: US/10/398,104
; CURRENT FILING DATE: 2003-01-04
; PRIOR APPLICATION NUMBER: PCT/EP01/11409
; PRIOR FILING DATE: 2001-10-03
  PRIOR APPLICATION NUMBER: GB 0024200.8
  PRIOR FILING DATE: 2000-10-03
; NUMBER OF SEQ ID NOS: 352
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 267
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: LOS peptide mimotope sequence
US-10-398-104-267
 Query Match
                         27.3%; Score 3; DB 12; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
           3; Conservative
                              0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                           0;
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```
8 RRP 10
Qy
              \perp
            3 RRP 5
Db
RESULT 69
US-10-607-565-116
; Sequence 116, Application US/10607565
; Publication No. US20040048294A1
; GENERAL INFORMATION:
  APPLICANT: Rosen et al.
  TITLE OF INVENTION: 31 Human Secreted Proteins
  FILE REFERENCE: PZ033P1
  CURRENT APPLICATION NUMBER: US/10/607,565
  CURRENT FILING DATE: 2003-06-27
  PRIOR APPLICATION NUMBER: US/09/531,119
  PRIOR FILING DATE: 2000-03-20
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/101,546
  PRIOR FILING DATE: EARLIER FILING DATE: 1998-09-23
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/102,895
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-10-02
; NUMBER OF SEQ ID NOS: 140
  SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 116
    LENGTH: 11
    TYPE: PRT
    ORGANISM: Homo sapiens
US-10-607-565-116
  Query Match
                          27.3%; Score 3; DB 12; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
  Matches
             3; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            9 RPR 11
              \mathbf{I} \mathbf{I} \mathbf{I}
            3 RPR 5
Db
RESULT 70
US-10-149-135-168
; Sequence 168, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
  APPLICANT: Fikes, John
  APPLICANT: Sette, Alessandro
  APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
  APPLICANT: Chesnut, Robert
  APPLICANT: Celis, Esteban
  APPLICANT: Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
```

; PRIOR APPLICATION NUMBER: PCT/US00/33545

```
PRIOR FILING DATE: 2000-12-11
   PRIOR APPLICATION NUMBER: US 09/458,298
  PRIOR FILING DATE: 1999-12-10
  PRIOR APPLICATION NUMBER: US 09/189,702
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/205,713
  PRIOR FILING DATE: 1994-03-04
  PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
  PRIOR FILING DATE: 1993-06-04
  PRIOR APPLICATION NUMBER: US 08/027,146
  PRIOR FILING DATE: 1993-03-05
  NUMBER OF SEQ ID NOS: 2479
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 168
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
   OTHER INFORMATION: Artificial Peptide
US-10-149-135-168
  Query Match
                         27.3%; Score 3; DB 12; Length 11;
  Best Local Similarity
                         100.0%; Pred. No. 1.2e+04;
                              0; Mismatches 0; Indels
            3; Conservative
                                                                0;
                                                                    Gaps
                                                                            0;
           5 KTG 7
Qу
             Db
           1 KTG 3
RESULT 71
US-10-149-135-203
; Sequence 203, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
 APPLICANT: Fikes, John
 APPLICANT: Sette, Alessandro
 APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
             Chesnut, Robert
  APPLICANT:
  APPLICANT: Celis, Esteban
  APPLICANT: Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: PCT/US00/33545
  PRIOR FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: US 09/458,298
; PRIOR FILING DATE: 1999-12-10
; PRIOR APPLICATION NUMBER: US 09/189,702
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: US 08/205,713
; PRIOR FILING DATE: 1994-03-04
```

```
PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
 PRIOR FILING DATE: 1993-06-04
; PRIOR APPLICATION NUMBER: US 08/027,146
 PRIOR FILING DATE: 1993-03-05
 NUMBER OF SEQ ID NOS: 2479
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 203
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Artificial Peptide
US-10-149-135-203
  Query Match
                         27.3%; Score 3; DB 12; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.2e+04;
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
           5 KTG 7
Qу
             +111
Db
           6 KTG 8
RESULT 72
US-10-149-135-232
; Sequence 232, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
; APPLICANT: Fikes, John
  APPLICANT: Sette, Alessandro
  APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
  APPLICANT: Chesnut, Robert
  APPLICANT: Celis, Esteban
  APPLICANT: Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: PCT/US00/33545
  PRIOR FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: US 09/458,298
  PRIOR FILING DATE: 1999-12-10
  PRIOR APPLICATION NUMBER: US 09/189,702
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/205,713
  PRIOR FILING DATE: 1994-03-04
  PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
  PRIOR FILING DATE: 1993-06-04
  PRIOR APPLICATION NUMBER: US 08/027,146
  PRIOR FILING DATE: 1993-03-05
; NUMBER OF SEQ ID NOS: 2479
```

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SOFTWARE: PatentIn version 3.1
; SEQ ID NO 232
   LENGTH: 11
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Artificial Peptide
US-10-149-135-232
                         27.3%; Score 3; DB 12; Length 11;
 Query Match
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            5 KTG 7
Db
RESULT 73
US-10-149-135-258
; Sequence 258, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
  APPLICANT: Fikes, John
  APPLICANT: Sette, Alessandro
  APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
  APPLICANT: Chesnut, Robert
  APPLICANT: Celis, Esteban
  APPLICANT: Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: PCT/US00/33545
  PRIOR FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: US 09/458,298
  PRIOR FILING DATE: 1999-12-10
  PRIOR APPLICATION NUMBER: US 09/189,702
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/205,713
  PRIOR FILING DATE: 1994-03-04
  PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
  PRIOR FILING DATE: 1993-06-04
  PRIOR APPLICATION NUMBER: US 08/027,146
   PRIOR FILING DATE: 1993-03-05
  NUMBER OF SEO ID NOS: 2479
   SOFTWARE: PatentIn version 3.1
; SEQ ID NO 258
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   ORGANISM: Artificial Sequence
    FEATURE:
   OTHER INFORMATION: Artificial Peptide
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           3; Conservative
                                                  0; Indels
 Matches
           5 KTG 7
Qу
             \Box\Box
Db
           4 KTG 6
RESULT 74
US-10-149-135-584
; Sequence 584, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
  APPLICANT: Fikes, John
  APPLICANT: Sette, Alessandro
  APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
  APPLICANT: Chesnut, Robert
  APPLICANT: Celis, Esteban
  APPLICANT: Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: PCT/US00/33545
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  PRIOR APPLICATION NUMBER: US 09/458,298
  PRIOR FILING DATE: 1999-12-10
  PRIOR APPLICATION NUMBER: US 09/189,702
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/205,713
  PRIOR FILING DATE: 1994-03-04
  PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
  PRIOR FILING DATE: 1993-06-04
  PRIOR APPLICATION NUMBER: US 08/027,146
  PRIOR FILING DATE: 1993-03-05
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; SEQ ID NO 584
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    FEATURE:
    OTHER INFORMATION: Artificial Peptide
US-10-149-135-584
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Db

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RESULT 75
US-10-149-135-614
; Sequence 614, Application US/10149135
; Publication No. US20040053822A1
; GENERAL INFORMATION:
  APPLICANT: Fikes, John
  APPLICANT: Sette, Alessandro
  APPLICANT: Sidney, John
  APPLICANT: Southwood, Scott
  APPLICANT:
              Chesnut, Robert
  APPLICANT:
              Celis, Esteban
  APPLICANT:
              Keogh, Elissa
  TITLE OF INVENTION: Inducing Cellular Immune Responses to
  TITLE OF INVENTION: MAGE2/3 Using Peptide and Nucleic Acid Compositions
  FILE REFERENCE: 2060.0130001
  CURRENT APPLICATION NUMBER: US/10/149,135
  CURRENT FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: PCT/US00/33545
  PRIOR FILING DATE: 2000-12-11
  PRIOR APPLICATION NUMBER: US 09/458,298
  PRIOR FILING DATE: 1999-12-10
  PRIOR APPLICATION NUMBER: US 09/189,702
  PRIOR FILING DATE: 1998-11-10
  PRIOR APPLICATION NUMBER: US 08/205,713
  PRIOR FILING DATE: 1994-03-04
  PRIOR APPLICATION NUMBER: US 08/159,184
  PRIOR FILING DATE: 1993-11-29
  PRIOR APPLICATION NUMBER: US 08/073,205
  PRIOR FILING DATE: 1993-06-04
  PRIOR APPLICATION NUMBER: US 08/027,146
  PRIOR FILING DATE: 1993-03-05
  NUMBER OF SEQ ID NOS: 2479
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; SEQ ID NO 614
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    FEATURE:
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US-10-149-135-614
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  Best Local Similarity
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            3; Conservative
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            5 KTG 7
Qу
            5 KTG 7
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Search completed: April 8, 2004, 16:35:44 Job time: 40.3077 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 8, 2004, 15:30:07; Search time 27.7692 Seconds

(without alignments)

124.984 Million cell updates/sec

Title: US-09-787-443A-9

Perfect score: 11

Sequence: 1 ATNKKTGRRPR 11

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 1017041 seqs, 315518202 residues

Word size:

Total number of hits satisfying chosen parameters: 460

Minimum DB seq length: 11 Maximum DB seq length: 11

Post-processing: Listing first 100 summaries

Database: SPTREMBL 25:\*

1: sp\_archea:\*
2: sp\_bacteria:\*
3: sp fungi:\*

4: sp\_human:\*

5: sp\_invertebrate:\*

6: sp\_mammal:\*

7: sp mhc:\*

8: sp organelle:\*

9: sp\_phage:\*

10: sp\_plant:\*

11: sp\_rodent:\*

12: sp\_virus:\*

13: sp\_vertebrate:\*

14: sp\_unclassified:\*

15: sp\_rvirus:\*

16: sp bacteriap:\*

17: sp archeap:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

ક

Result Query

No. Score Match Length DB ID

Description

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2	3	27.3	11	2	Q9L4F7	Q914f7 bacillus ce
3	3	27.3	11	4	Q15997	Q15997 homo sapien
4	3	27.3	11	4	Q8TDA8	Q8tda8 homo sapien
5	3	27.3	11	5	Q8MPQ3	Q8mpq3 caenorhabdi
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8	3	27.3	11	8	Q8MB39	Q8mb39 wilsonia hu
9	3	27.3	11	8	Q8MB58	Q8mb58 seddera hir
10	3	27.3	11	8	Q8MAZ3	Q8maz3 maripa repe
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12	3	27.3	11	8	Q8MB77	Q8mb77 odonellia h
13	3	27.3	11	8	Q8MB79	Q8mb79 aniseia arg
14	3	27.3	11	8	Q8MB97	Q8mb97 merremia pe
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17	2	18.2	11	2	Q9R790	Q9r790 borrelia ga
		18.2	11	2	Q47451	Q47451 escherichia
18	2					Q9r7u8 pseudomonas
19	2	18.2	11	2	Q9R7U8	
20	2	18.2	11	2	Q9S618	Q9s618 prochloroco
21	2	18.2	11	2	Q9EUZ3	Q9euz3 escherichia
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25	2	18.2	11	2	Q9K332	Q9k332 staphylococ
26	2	18.2	11	2	Q9RFZ2	Q9rfz2 mycoplasma
27	2	18.2	11	2	Q47604	Q47604 escherichia
28	2	18.2	11	2	Q47345	Q47345 escherichia
29	2	18.2	11	2	Q47420	Q47420 escherichia
30	2	18.2	11	2	Q44090	Q44090 acholeplasm
31	2	18.2	11	2	Q56413	Q56413 escherichia
32	2	18.2	11	2	Q47059	Q47059 escherichia
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34	2	18.2	11	2	P83537	P83537 lactobacill
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36	2	18.2	11	4	060761	060761 homo sapien
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41	2	18.2	11	5	P82698	P82698 leucophaea
42	2	18.2	11	5	P82699	P82699 leucophaea
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44	2	18.2	11	5	Q86D32	Q86d32 trypanosoma
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46	2	18.2	11	5	Q95PX6	Q95px6 caenorhabdi
47	2	18.2	11	6	Q9TRW5	Q9trw5 bos taurus
48	2	18.2	11	6	Q9TRX0	Q9trx0 sus scrofa
49	2	18.2	11	7	077876	077876 oreochromis
50	2	18.2	11	7	Q29831	Q29831 homo sapien
51	2	18.2	11	7	019718	O19718 homo sapien
52	2	18.2	11	8	Q94VG8	Q94vg8 varanus gou
53	2	18.2	11	8	Q9G5Y6	Q9g5y6 agama agama
54	2	18.2	11	8	Q9G679	Q9g679 hypsilurus
55	2	18.2	11	8	Q94VI5	Q94vi5 varanus exa
56	2	18.2	11	8	Q94V74	Q94v74 lanthanotus
57	2	18.2	11	8	Q9GH12	Q9gh12 pandorina m

58	2	18.2	11	8	Q94VE7	Q94ve7 varanus kom
59	2	18.2	11	8	Q94VB8	Q94vb8 varanus sal
60	2	18.2	11	8	Q94VH7	Q94vh7 varanus gil
61	2	18.2	11	8	Q94VK1	Q94vkl varanus aca
62	2	18.2	11	8	Q7YKD8	Q7ykd8 ribes oxyac
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67	2	18.2	11	9	Q38415	Q38415 bacteriopha
68	2	18.2	11	9	Q37925	Q37925 bacteriopha
69	2	18.2	11	10	Q06626	Q06626 solanum tub
70	2	18.2	11	10	Q9T0L9	Q9t019 brassica ol
71	2	18.2	11	10	Q8RUE7	Q8rue7 zea mays (m
72	2	18.2	11	10	004131	Q04131 lycopersico
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74	2	18.2	11	10	Q7X9Y3	Q7x9y3 cucumis sat
75	2	18.2	11	11	Q99JC3	Q99jc3 rattus sp.
76	2	18.2	11	11	Q9QXM6	Q9qxm6 mus musculu
70 77	2	18.2	11	11	P97755	P97755 rattus norv
7 7 7 8	2	18.2	11	11	Q99N81	Q99n81 mus musculu
70 79	2	18.2	11	11	Q99N01 Q9R1N6	Q9r1n6 mus musculu
	2	18.2	11		Q60807	Q60807 mus musculu
80				11		Q9qyf6 mus musculu
81	2	18.2	11	11	Q9QYF6	Q9qy10 mus musculu Q9z1h5 mus musculu
82	2	18.2	11	11	Q9Z1H5	
83	2	18.2	11	11	Q8R2J7	Q8r2j7 mesocricetu
84	2	18.2	11	11	Q80WI3	Q80wi3 rattus sp.
85	2	18.2	11	12	Q86866	Q86866 lymphocytic
86	2	18.2	11	12	Q8JS92	Q8js92 hepatitis b
87	2	18.2	11	12	P89269	P89269 xestia c-ni
88	2	18.2	11	12	Q86864	Q86864 lymphocytic
89	2	18.2	11	12	Q997C1	Q997c1 east africa
90	2	18.2	11	12	Q66877	Q66877 feline cali
91	2	18.2	11	12	Q86868	Q86868 lymphocytic
92	2	18.2	11	12	040974	040974 cauliflower
93	2	18.2	11	13	Q9PS22	Q9ps22 xenopus lae
94	2	18.2	11	13	Q90WA2	Q90wa2 gallus gall
95	2	18.2	11	13	Q800X7	Q800x7 chelydra se
96	2	18.2	11	15	Q83410	Q83410 mouse mamma
97	1	9.1	11	2	068237	068237 borrelia bu
98	1	9.1	11	2	Q48933	Q48933 mycobacteri
99	1	9.1	11	2	Q9AIZ7	Q9aiz7 carsonella
100	1	9.1	11	2	Q8RKN1	Q8rkn1 escherichia

## ALIGNMENTS

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RESULT 1
Q62207
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                                   PRT;
                                           11 AA.
ID
    Q62207
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AC
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
    01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     Schwannomin (Fragment).
GN
    NF2.
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OS
    Mus musculus (Mouse).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OC
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OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     TISSUE=Brain;
RC
     MEDLINE=95072570; PubMed=7981675;
RX
     Huynh D.P., Nechiporuk T., Pulst S.-M.;
RA
RT
     "Alternative transcripts in the mouse neurofibromatosis type 2 (NF2)
     gene are conserved and code for schwannomins with distinct C-terminal
RТ
RT
     domains.";
     Hum. Mol. Genet. 3:1075-1079(1994).
RL
     EMBL; L28838; AAA57151.1; -.
DR
     PIR; I54368; I54368.
DR
DR
     MGD; MGI:97307; Nf2.
     NON TER
                          1
FT
                   1
                11 AA; 1238 MW; C51FA05774140866 CRC64;
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                                                    0; Indels
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QУ
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            5 GRRP 8
Db
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     01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
DE
     Phosphatidylinositol-specific phospholipase C (PI-PLC)
DE
     (Fragment).
GN
     PLCA.
os
     Bacillus cereus.
     Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OC
OX
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RN
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RC
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     MEDLINE=20055637; PubMed=10589720;
RX
     Okstad O., Gominet M., Purnelle B., Rose M., Lereclus D., Kolsto A.B.;
RA
     "Sequence analysis of three Bacillus cereus loci under PIcR-regulated
RT
     genes encoding degradative enzymes and enterotoxin.";
RT
RL
     Microbiology 145:3129-3138(1999).
DR
     EMBL; AJ243711; CAB69804.1; -.
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                         11
                11 AA; 1335 MW; 4277A30E20572333 CRC64;
SO
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                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
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                                                                              0:
  Matches
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3 NKK 5
Qv
             3 NKK 5
Db
RESULT 3
Q15997
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                                            11 AA.
ID
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AC
     Q15997;
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     RARA protein (Fragment).
DE
GN
     RARA.
     Homo sapiens (Human).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
     NCBI TaxID=9606;
OX
     [1]
RN
RP
     SEQUENCE FROM N.A.
     MEDLINE=93222087; PubMed=7682097;
RX
     Dong S., Geng J.P., Tong J.H., Wu Y., Cai J.R., Sun G.L., Chen S.R.,
RA
     Wang Z.Y., Larsen C.J., Berger R., et al;
RA
     "Breakpoint clusters of the PML gene in acute promyelocytic leukemia:
RT
     primary structure of the reciprocal products of the PML-RARA gene in a
RT
     patient with t(15;17).";
RT
     Genes Chromosomes Cancer 6:133-139(1993).
RL
     EMBL; S57794; AAD13888.1; -.
DR
     PIR; I54081; I54081.
DR
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             3; Conservative
                                0; Mismatches
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                                                                              0;
            9 RPR 11
Qy
              111
            3 RPR 5
Db
RESULT 4
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                                            11 AA.
ID
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                 PRELIMINARY;
AC
     Q8TDA8;
     01-JUN-2002 (TrEMBLrel. 21, Created)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     Glutathione synthetase (Fragment).
DE
     Homo sapiens (Human).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Cho Y.-W., Lee Y.-Y., Lim C.-J.;
     "Cloning and characterization of glutathione synthetase gene from
RT
```

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RT
     human placenta DNA.";
     Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AF485789; AAL91591.1; -.
DR
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FT
                        11
     SEQUENCE
                11 AA; 1235 MW; 1CE28D1E35B86374 CRC64;
SO
                          27.3%; Score 3; DB 4; Length 11;
 Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                              0;
             3; Conservative
                                0; Mismatches 0; Indels
                                                                 0; Gaps
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Qy
              | | |
            2 ATN 4
Db
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                                           11 AA.
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AC
     Q8MPQ3;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DT
     Hypothetical protein Y23H5A.8b.
DΕ
     Y23H5A.8.
GN
OS
     Caenorhabditis elegans.
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
OC
OC
     Rhabditidae; Peloderinae; Caenorhabditis.
OX
     NCBI_TaxID=6239;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=Bristol N2;
RC
     MEDLINE=99069613; PubMed=9851916;
RX
RA
     Waterston R.;
RT
     "Genome sequence of the nematode C. elegans: a platform for
RT
     investigating biology. The C. elegans Sequencing Consortium.";
RL
     Science 282:2012-2018(1998).
RN
     [2]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Bristol N2;
     Dempsey S., Le T.T.;
RA
RT
     "The sequence of C. elegans cosmid Y23H5A.";
     Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
RL
RN
     SEQUENCE FROM N.A.
RP
     STRAIN=Bristol N2;
RC
RA
     Waterston R.;
     Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AF077541; AAM54173.1; -.
     WormPep; Y23H5A.8b; CE31097.
DR
KW
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SQ
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  Query Match
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  Matches
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RESULT 6
Q9GL48
     Q9GL48
                 PRELIMINARY;
                                    PRT:
                                            11 AA.
TD
AC
     Q9GL48;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     G protein-coupled receptor (Fragment).
DE
OS
     Sus scrofa (Pig).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OC
OX
     NCBI TaxID=9823;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     Nagasaka T., Boulday G., Coupel S., Coulon F., Tesson L.,
RA
     Heslan J.-M., Soulillou J.-P., Charreau B.;
RA
     "Alternative double screening for differentially expressed genes by
RT
     modified RNA differential display and semi-quantitative Reverse
RT
RT
     Northern blot.";
     Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AF319662; AAG33870.1; -.
DR
     GO; GO:0004872; F:receptor activity; IEA.
DR
KW
     Receptor.
FT
     NON TER
                   1
                           1
                11 AA; 1298 MW;
                                  822261F10861BB41 CRC64;
SO
     SEQUENCE
                           27.3%; Score 3; DB 6; Length 11;
  Query Match
                           100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                                0;
  Matches
             3; Conservative
                                  0; Mismatches
                                                     0; Indels
                                                                    0; Gaps
            6 TGR 8
Qу
              \parallel \parallel \parallel
Db
            6 TGR 8
RESULT 7
Q8MAZ1
                                             11 AA.
ID
     Q8MAZ1
                 PRELIMINARY;
                                    PRT;
AC
     Q8MAZ1;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DŢ
DΕ
     PsbJ (Fragment).
     PSBJ.
GN
OS
     Maripa paniculata.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Maripa.
OC
OX
     NCBI TaxID=197411;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Stefanovic S., Krueger L., Olmstead R.G.;
```

```
"Monophyly of the Convolvulaceae and circumscription of their major
RT
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
     Am. J. Bot. 0:0-0(2002).
RL
DR
     EMBL; AY100937; AAM55869.1; -.
     GO; GO:0009507; C:chloroplast; IEA.
DR
     Chloroplast.
KW
     NON TER
\mathbf{FT}
                  11
                         11
                        1260 MW; 93736D59440861B1 CRC64;
     SEOUENCE 11 AA;
SQ
                          27.3%; Score 3; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                              0;
                                                                  0; Gaps
             3; Conservative
                                0; Mismatches
                                                    0; Indels
  Matches
            6 TGR 8
Qv
              111
            5 TGR 7
Db
RESULT 8
08MB39
                                   PRT;
                                            11 AA.
                 PRELIMINARY;
ID
     Q8MB39
AC
     Q8MB39;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     PsbJ (Fragment).
DE
GN
     PSBJ.
OS
     Wilsonia humilis.
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC.
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Wilsonia.
OC
OX
     NCBI TaxID=197481;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
RT
     "Monophyly of the Convolvulaceae and circumscription of their major
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
RL
     Am. J. Bot. 0:0-0(2002).
     EMBL; AY100914; AAM55777.1; -.
DR
DR
     GO; GO:0009507; C:chloroplast; IEA.
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
                11 AA; 1260 MW;
                                  93736D59440861B1 CRC64;
SQ
     SEQUENCE
  Query Match
                           27.3%; Score 3;
                                             DB 8; Length 11;
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                               0;
             3; Conservative
                                0; Mismatches
                                                    0; Indels
  Matches
            6 TGR 8
Qу
              111
            5 TGR 7
Db
RESULT 9
Q8MB58
ID
     Q8MB58
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
```

```
O8MB58;
AC
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     PsbJ (Fragment).
GN
     PSBJ.
     Seddera hirsuta.
OS
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Seddera.
OC
OX
     NCBI TaxID=197444;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
     "Monophyly of the Convolvulaceae and circumscription of their major
RT
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
     Am. J. Bot. 0:0-0(2002).
RL
     EMBL; AY100905; AAM55743.1; -.
DR
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
                11 AA; 1260 MW; 93736D59440861B1 CRC64;
     SEQUENCE
SO
                          27.3%; Score 3; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                               0;
             3; Conservative
                                0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
  Matches
            6 TGR 8
Qу
              IIII
            5 TGR 7
Dh
RESULT 10
Q8MAZ3
     Q8MAZ3
                 PRELIMINARY;
                                    PRT:
                                            11 AA.
ID
AC
     Q8MAZ3;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DΕ
     PsbJ (Fragment).
GN
     PSBJ.
OS
     Maripa repens.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Maripa.
OC
OX
     NCBI TaxID=197412;
RN
RP
     SEQUENCE FROM N.A.
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
     "Monophyly of the Convolvulaceae and circumscription of their major
RT
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
RL
     Am. J. Bot. 0:0-0(2002).
     EMBL; AY100936; AAM55865.1; -.
DR
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
```

```
NON TER
                  11
FT
                         11
     SEOUENCE
                11 AA;
                        1260 MW; 93736D59440861B1 CRC64;
SO
                          27.3%; Score 3; DB 8; Length 11;
 Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                              0;
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
 Matches
            6 TGR 8
Qy
              111
Db
            5 TGR 7
RESULT 11
Q8MBE1
                                           11 AA.
                 PRELIMINARY;
                                   PRT;
     Q8MBE1
ID
AC
     Q8MBE1;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     PsbJ (Fragment).
GN
     PSBJ.
     Ipomoea alba.
OS
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
OC
     lamiids; Solanales; Convolvulaceae; Ipomoea.
OX
     NCBI TaxID=89634;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
RT
     "Monophyly of the Convolvulaceae and circumscription of their major
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
RL
     Am. J. Bot. 0:0-0(2002).
DR
     EMBL; AY100861; AAM55568.1; -.
DR
     GO; GO:0009507; C:chloroplast; IEA.
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
     SEQUENCE
                11 AA; 1260 MW; 93736D59440861B1 CRC64;
SQ
                          27.3%; Score 3; DB 8; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 7.8e+03;
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            3; Conservative
            6 TGR 8
Qу
              III
            5 TGR 7
Db
RESULT 12
Q8MB77
     Q8MB77
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
AC
     Q8MB77;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     PsbJ (Fragment).
GN
     PSBJ.
```

```
Odonellia hirtiflora.
OS
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Odonellia.
OC
     NCBI TaxID=197424;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
     "Monophyly of the Convolvulaceae and circumscription of their major
RТ
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
     Am. J. Bot. 0:0-0(2002).
RL
DR
     EMBL; AY100897; AAM55711.1; -.
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
                        1260 MW; 93736D59440861B1 CRC64;
SO
     SEQUENCE
                11 AA;
                          27.3%; Score 3; DB 8; Length 11;
 Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0;
                                                                     Gaps
                                                                              0;
 Matches
            6 TGR 8
Qу
              111
            5 TGR 7
Db
RESULT 13
Q8MB79
     08MB79
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
AC
     Q8MB79;
DT
     01-OCT-2002 (TrEMBLrel. 22, Created)
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     PsbJ (Fragment).
GN
     PSBJ.
OS
     Aniseia argentina.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC.
OC
     lamiids; Solanales; Convolvulaceae; Aniseia.
     NCBI TaxID=197349;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
     "Monophyly of the Convolvulaceae and circumscription of their major
RT
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
     Am. J. Bot. 0:0-0(2002).
RL
     EMBL; AY100895; AAM55703.1; -.
DR
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
                11 AA; 1260 MW; 93736D59440861B1 CRC64;
     SEQUENCE
SO
                          27.3%; Score 3; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                                0; Gaps
                                                                              0;
                                                   0; Indels
  Matches
```

```
6 TGR 8
Qу
              \perp
            5 TGR 7
Db
RESULT 14
Q8MB97
ID
    Q8MB97
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
AC
     Q8MB97;
DT
     01-OCT-2002 (TrEMBLrel. 22, Created)
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     PsbJ (Fragment).
     PSBJ.
GN
    Merremia peltata.
OS
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Convolvulaceae; Merremia.
OC
     NCBI TaxID=197416;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     Stefanovic S., Krueger L., Olmstead R.G.;
RA
     "Monophyly of the Convolvulaceae and circumscription of their major
RT
     lineages based on DNA sequences of multiple chloroplast loci.";
RT
RL
     Am. J. Bot. 0:0-0(2002).
DR
     EMBL; AY100885; AAM55663.1; -.
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
                  11
                         11
                                   93736D59440861B1 CRC64;
SQ
     SEQUENCE
                11 AA;
                        1260 MW;
  Query Match
                          27.3%; Score 3; DB 8; Length 11;
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                       Gaps
  Matches
             3; Conservative
                               0; Mismatches
                                                     0;
                                                       Indels
            6 TGR 8
Qy
              +111
Db
            5 TGR 7
RESULT 15
Q9DZ32
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
ID
     Q9DZ32
AC
     Q9DZ32;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
     Gag polyprotein (Fragment).
DΕ
GN
OS
     Human immunodeficiency virus 1.
     Viruses; Retroid viruses; Retroviridae; Lentivirus.
OC
OX
     NCBI TaxID=11676;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=20461476; PubMed=11005867;
```

RX

```
Martinez-Picado J., DePasquale M.P., Kartsonis N., Hanna G.J.,
RA
     Wong J., Finzi D., Rosenberg E., Gunthard H.F., Sutton L., Savara A.,
RA
     Petropoulos C.J., Hellmann N., Walker B.D., Richman D.D.,
RA
     Siliciano R., D'Aquila R.T.;
RA
RT
     "Antiretroviral resistance during successful therapy of HIV type 1\,
     infection.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 97:10948-10953(2000).
RL
DR
     EMBL; AF292799; AAG25407.1; -.
KW
     Polyprotein.
FT
     NON TER
                   1
                          1
     SEQUENCE
                        1386 MW;
                                 79DC73C0145771B4 CRC64;
                11 AA;
SQ
                          27.3%; Score 3; DB 15; Length 11;
  Query Match
                          100.0%; Pred. No. 7.8e+03;
  Best Local Similarity
                                                                              0;
                                                                  0; Gaps
                               0; Mismatches
                                                 0; Indels
  Matches
            3; Conservative
            6 TGR 8
Qу
              \mathbf{I}
            2 TGR 4
Db
RESULT 16
Q9AIY6
                                   PRT:
                                           11 AA.
ID
     Q9AIY6
                 PRELIMINARY;
AC
     O9AIY6;
DT
     01-JUN-2001 (TrEMBLrel. 17, Created)
     01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Tryptophanyl-tRNA synthetase (Fragment).
DΕ
GN
OS
     Carsonella ruddii.
     Bacteria; Proteobacteria; Gammaproteobacteria; Candidatus Carsonella.
OC.
OX
     NCBI TaxID=114186;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=20336438; PubMed=10877784;
RA
     Thao M.L., Moran N.A., Abbot P., Brennan E.B., Burckhardt D.H.,
RA
     Baumann P.;
     "Cospeciation of psyllids and their primary prokaryotic
RT
RT
     endosymbionts.";
     Appl. Environ. Microbiol. 66:2898-2905(2000).
RL
RN
     [2]
     SEQUENCE FROM N.A.
RP
RX
     MEDLINE=21125546; PubMed=11222582;
     Clark M.A., Baumann L., Thao M.L., Moran N.A., Baumann P.;
RA
     "Degenerative Minimalism in the Genome of a Psyllid Endosymbiont.";
RT
     J. Bacteriol. 183:1853-1861(2001).
RL
DR
     EMBL; AF211138; AAK15388.1; -.
     GO; GO:0004812; F:tRNA ligase activity; IEA.
DR
KW
     Aminoacyl-tRNA synthetase.
FT
     NON TER
                   1
                11 AA; 1295 MW; 0CA993A5345B5720 CRC64;
SQ
     SEQUENCE
  Query Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0:
             2; Conservative
                                0; Mismatches
                                                   0; Indels
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```
Qу
            3 NK 4
             7 NK 8
Db
RESULT 17
Q9R790
                                            11 AA.
                 PRELIMINARY;
                                   PRT;
ID
     Q9R790
AC
     Q9R790;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Outer surface protein C (Fragment).
DΕ
GN
     OSPC.
OS
     Borrelia garinii.
     Bacteria; Spirochaetes; Spirochaetales; Spirochaetaceae; Borrelia.
OC
OX
     NCBI TaxID=29519;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=G25;
     MEDLINE=97426044; PubMed=9282748;
RX
     Tilly K., Casjens S., Stevenson B., Bono J.L., Samuels D.S., Hogan D.,
RA
RA
     Rosa P.;
     "he Borrelia burgdorferi circular plasmid cp26: conservation of
RT
     plasmid structure and targeted inactivation of the ospC gene.";
RT
     Mol. Microbiol. 25:361-374(1997).
RL
     EMBL; U93700; AAC45535.1; -.
DR
     GO; GO:0009279; C:external outer membrane (sensu Gram-negativ. . .; IEA.
DR
     GO; GO:0003793; F:defense/immunity protein activity; IEA.
DR
     GO; GO:0006952; P:defense response; IEA.
DR
     InterPro; IPR001800; Lipoprotein 6.
DR
     Pfam; PF01441; Lipoprotein 6; 1.
DR
FT
     NON TER
                  11
                         11
                11 AA; 1250 MW; 0868D864C5B731A4 CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                      Gaps
                                                                               0;
  Matches
            4 KK 5
Qу
              11
            2 KK 3
Db
RESULT 18
Q47451
                                    PRT;
                                            11 AA.
                 PRELIMINARY;
ID
     Q47451
AC
     047451;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     Plasmid pRJ1004 DNA (Fragment).
OS
     Escherichia coli.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OC
     NCBI_TaxID=562;
OX
```

RN

[1]

```
STRAIN=pRJ1004;
RC
     MEDLINE=96130847; PubMed=8594334;
RX
     Brown N.L., Barrett S.R., Camakaris J., Lee B.T., Rouch D.A.;
RA
     "Molecular genetics and transport analysis of the copper-resistance
RT
     determinants (pco) from Escherichia coli plasmid pRJ1004.";
RT
     Mol. Microbiol. 17:1153-1166(1995).
RL
     EMBL; X83541; CAA58524.1; -.
DR
     PIR; S70166; S52252.
DR
FТ
     NON TER
                  11
                         11
     SEQUENCE
                11 AA; 1195 MW;
                                  47D864F8ADC1A057 CRC64;
SQ
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                0; Mismatches
                                                    0; Indels
                                                                      Gaps
                                                                              0;
             2; Conservative
  Matches
            1 AT 2
Qу
              \Box
            7 AT 8
Db
RESULT 19
09R7U8
                                   PRT;
                                           11 AA.
                 PRELIMINARY;
ID
     09R7U8
     09R7U8;
AC
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     DNR protein (A regulatory protein for the expression of the NiR and
DΕ
     nor genes) (Fragment).
DE
     Pseudomonas aeruginosa.
OS
     Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC
OC
     Pseudomonadaceae; Pseudomonas.
OX
     NCBI TaxID=287;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=PAO1;
RX
     MEDLINE=95226457; PubMed=7711073;
     Arai H., Igarashi Y., Kodama T.;
RA
     "The structural genes for nitric oxide reductase from Pseudomonas
RT
     aeruginosa.";
RT
     Biochim. Biophys. Acta 1261:279-284(1995).
RL
RN
RP
     SEQUENCE FROM N.A.
     STRAIN=PAO1;
RC.
     MEDLINE=95394152; PubMed=7664887;
RX
     Arai H., Igarashi Y., Kodama T.;
RA
     "Expression of the nir and nor genes for denitrification of
RT
     Pseudomonas aeruginosa requires a novel CRP/FNR-related
RT
     transcriptional regulator, DNR, in addition to ANR.";
RT
     FEBS Lett. 371:73-76(1995).
RL
DR
     EMBL; D50019; BAA08746.1; -.
FT
     NON TER
                   1
                          1
                11 AA; 1543 MW; DF363CAE141B5736 CRC64;
SO
     SEQUENCE
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
```

SEQUENCE FROM N.A.

RP

```
0; Gaps
                                                                             0;
  Matches 2; Conservative 0; Mismatches
                                                   0; Indels
            8 RR 9
Qy
              \Box
Db
            7 RR 8
RESULT 20
098618
                                           11 AA.
     Q9S618
                 PRELIMINARY;
                                   PRT;
ID
AC
     Q9S618;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
DT
     Cytochrome b6/f complex subunit IV (Fragment).
DΕ
GN
     PETD.
OS
     Prochlorococcus sp.
     Bacteria; Cyanobacteria; Prochlorophytes; Prochlorococcaceae;
OC
OC
     Prochlorococcus.
OX
     NCBI TaxID=1220;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Urbach E., Chisholm S.W.;
RA
     "Genetic diversity in Prochlorococcus populations flow cytometrically
RT
     sorted from the Sargasso Sea and Gulf Stream.";
RT
     Limnol. Oceanog. 43:1615-1630(1998).
RL
     EMBL; AF070132; AAD20740.1; -.
DR
FT
     NON TER
                 11
                        11
                11 AA; 1297 MW; 5CC38013B7633337 CRC64;
     SEOUENCE
SO
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                             0;
            4 KK 5
Qу
Db
            5 KK 6
RESULT 21
Q9EUZ3
ID
     Q9EUZ3
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
AC
     Q9EUZ3;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
     Ribosome binding factor A (Fragment).
DE
     RBFA.
GN
     Escherichia coli.
OS
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OX
     NCBI TaxID=562;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=IQ490;
     Hedegaard J., Kristensen J.E., Nakamura Y., Sperling-Petersen H.U.,
RA
RA
     Mortensen K.K.;
```

```
"Sequence of the infB gene from Escherichia coli strain IQ489 and
RT
RT
    Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
RL
    EMBL; AJ132862; CAC20133.1; -.
DR
FT
    NON TER
                 11
                        11
               11 AA; 1319 MW; 6B234CFE740879CB CRC64;
SQ
    SEQUENCE
                          18.2%; Score 2; DB 2; Length 11;
 Query Match
 Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
 Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           7 GR 8
Qy
             11
            6 GR 7
Db
RESULT 22
Q8RMI8
                                   PRT;
                                           11 AA.
ID
                PRELIMINARY;
    Q8RMI8
AC
    Q8RMI8;
     01-JUN-2002 (TrEMBLrel. 21, Created)
DT
DT
     01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
    ErmB (Fragment).
DE
GN
    ERMB.
    Enterococcus hirae.
OS
OG
    Plasmid pMKH1.
OC
     Bacteria; Firmicutes; Lactobacillales; Enterococcaceae; Enterococcus.
OX
    NCBI TaxID=1354;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Borgen K., Sorum M., Wasteson Y., Kruse H., Oppegaard H.;
RA
RT
     "Genetic linkage between ermB and vanA in Enterococcus hirae of
RT
     poultry origin.";
RL
     Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF493942; AAM18554.1; -.
DR
    GO; GO:0046821; C:extrachromosomal DNA; IEA.
KW
     Plasmid.
    NON TER
FT
                   1
                          1
    SEQUENCE
               11 AA; 1359 MW; 08A7A8AA49C7273B CRC64;
SQ
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                         100.0%; Pred. No. 9.4e+04;
                                                                0; Gaps
                                                                             0;
 Matches
            2; Conservative 0; Mismatches 0; Indels
            7 GR 8
Qу
              \mathbf{H}
Db
            9 GR 10
RESULT 23
O8KTN1
                                           11 AA.
                                   PRT:
ID
    Q8KTN1
                 PRELIMINARY;
AC
     O8KTN1;
     01-OCT-2002 (TrEMBLrel. 22, Created)
DΤ
     01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
```

```
Phosphoribosylpyrophosphate synthetase (Fragment).
DE
GN
     Candidatus Tremblaya princeps.
OS
     Bacteria; Proteobacteria; Betaproteobacteria; Candidatus Tremblaya.
OC
OX
     NCBI TaxID=189385;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     MEDLINE=22083449; PubMed=12088995;
RX
     Baumann L., Thao M.L., Hess J.M., Johnson M.W., Baumann P.;
RA
     "The Genetic Properties of the Primary Endosymbionts of Mealybugs
RT
     Differ from Those of Other Endosymbionts of Plant Sap-Sucking
RT
RT
     Insects.";
     Appl. Environ. Microbiol. 68:3198-3205(2002).
RL
     EMBL; AF481911; AAM76018.1; -.
DR
     NON TER
                         11
FT
                  11
                11 AA; 1127 MW; 4C127758A8676727 CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                 0; Mismatches
                                                    0;
                                                       Indels
                                                                   0; Gaps
                                                                               0;
             2; Conservative
  Matches
            6 TG 7
Qу
              11
            8 TG 9
Db
RESULT 24
P71228
                                    PRT;
                                            11 AA.
ID
     P71228
                 PRELIMINARY;
AC
     P71228;
     01-FEB-1997 (TrEMBLrel. 02, Created)
חת
     01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
DT
     01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DT
DE
     Nitrate/nitrite sensor transmitter (Fragment).
GN
     NARO.
OS
     Escherichia coli.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC.
OC
     Enterobacteriaceae; Escherichia.
     NCBI TaxID=562;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=K-12;
     MEDLINE=92374842; PubMed=1508040;
RX
     Chiang R.C., Cavicchioli R., Gunsalus R.P.;
RA
     "Identification and characterization of narQ, a second nitrate sensor
RT
     for nitrate-dependent gene regulation in Escherichia coli.";
RT
RL
     Mol. Microbiol. 6:1913-1923(1992).
RN
     [2]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=K-12;
     MEDLINE=97113461; PubMed=8955321;
RX
     Cavicchioli R., Kolesnikow T., Chiang R.C., Gunsalus R.P.;
RA
     "Characterization of the aegA locus of Escherichia coli: control of
RT
     gene expression in response to anaerobiosis and nitrate.";
RT
     J. Bacteriol. 178:6968-6974(1996).
RT.
     EMBL; L34011; AAB46943.1; -.
DR
FT
     NON TER
                  11
                         11
```

```
11 AA; 1200 MW; 52E1CFFCA2D77403 CRC64;
     SEOUENCE
SO
                           18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                    0; Gaps
                                                                                0;
             2; Conservative
                               0; Mismatches
                                                  0; Indels
            9 RP 10
Qу
              \Pi
            5 RP 6
Db
RESULT 25
Q9K332
                 PRELIMINARY;
                                    PRT;
                                             11 AA.
ID
     Q9K332
AC
     Q9K332;
     01-OCT-2000 (TrEMBLrel. 15, Created)
DТ
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DT
DT
     Geh (Fragment).
DE
GN
     GEH.
     Staphylococcus aureus.
OS
     Bacteria; Firmicutes; Bacillales; Staphylococcus.
OC
     NCBI TaxID=1280;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=VARIOUS STRAINS;
     MEDLINE=20187516; PubMed=10722640;
RX
     Cramton S.E., Schnell N.F., Gotz F., Bruckner R.;
RA
     "Identification of a new repetitive element in Staphylococcus
RT
RT
     aureus.";
     Infect. Immun. 68:2344-2348(2000).
RL
     EMBL; AF195967; AAF60251.1; -.
DR
DR
     EMBL; AF195963; AAF60243.1; -.
DR
     EMBL; AF195964; AAF60245.1; -.
DR
     EMBL; AF195965; AAF60247.1; -.
DR
     EMBL; AF195966; AAF60249.1; -.
FT
     NON TER
                  1
                           1
                11 AA; 1262 MW; 4F978F86AAB1A723 CRC64;
SO
     SEQUENCE
                           18.2%; Score 2; DB 2; Length 11;
  Query Match
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                    0; Indels
                                                                    0; Gaps
                                                                                0;
                                 0; Mismatches
             2; Conservative
             5 KT 6
Qу
              11
Db
            1 KT 2
RESULT 26
O9RFZ2
                                    PRT;
                                             11 AA.
ID
     Q9RFZ2
                  PRELIMINARY;
     Q9RFZ2;
AC
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Fructose biphosphate aldolase (Fragment).
GN
     FBA.
```

```
Mycoplasma mycoides subsp. capri.
OS
     Bacteria; Firmicutes; Mollicutes; Mycoplasmataceae; Mycoplasma.
OC
OX
     NCBI TaxID=40477;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=PG3;
RC
     MEDLINE=20193983; PubMed=10727835;
RX
     Thiaucourt F., Lorenzon S., David A., Breard A.;
RA
     "Phylogeny of the Mycoplasma mycoides cluster as shown by sequencing
RT
     of a putative membrane protein gene.";
RT
     Vet. Microbiol. 72:251-268(2000).
RL
     EMBL; AF162998; AAF15255.1; -.
DR
     NON TER
                  11
                         11
FT
                11 AA; 1371 MW; 50B0881A3331FB57 CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
           2; Conservative
                                0; Mismatches
            4 KK 5
Qу
              11
            7 KK 8
Db
RESULT 27
Q47604
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
     Q47604
AC
     Q47604;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DΕ
     REase protein (Fragment).
     REASE.
GN
OS
     Escherichia coli.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OC
OX
     NCBI_TaxID=562;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=91139577; PubMed=1995588;
RX
RA
     Tao T., Bourne J.C., Blumenthal R.M.;
     "A family of regulatory genes associated with type II restriction-
RT
RT
     modification systems.";
     J. Bacteriol. 173:1367-1375(1991).
RL
     EMBL; M63621; AAA24560.1; -.
DR
FT
     NON TER
                  11
                         11
                11 AA; 1296 MW; 3039A71A34472AB7 CRC64;
     SEQUENCE
SO
  Ouery Match
                          18.2%; Score 2; DB 2; Length 11;
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
  Matches
            3 NK 4
Qу
              \perp
Db
            7 NK 8
```

```
RESULT 28
047345
                 PRELIMINARY;
                                   PRT:
                                           11 AA.
    Q47345
ID
AC
     047345;
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Leader peptide.
     Escherichia coli.
os
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OC
OX
    NCBI TaxID=562;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=K12;
     Faber F., van Giezen M., Van Gorcom R.F.M., Harder W.;
RA
     "Identification of two Escherichia coli K12 proteins which are induced
RT
     in response to pollutant stress.";
RT
     Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.
RL
RN
     SEQUENCE OF 2-11 FROM N.A.
RP
RC
     STRAIN=K12;
    MEDLINE=85134883; PubMed=6396419;
RX
     Hudson G.S., Davidson B.E.;
RA
     "Nucleotide sequence and transcription of the phenylalanine and
RT
     tyrosine operons of Escherichia coli K12.";
RT
     J. Mol. Biol. 180:1023-1051(1984).
RL
     EMBL; Z70523; CAA94435.1; -.
DR
     SEQUENCE 11 AA; 1402 MW; 87AB199204141775 CRC64;
SO
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
                                                                 0; Gaps
                                                                             0;
  Matches
           2; Conservative 0; Mismatches
                                                   0; Indels
          10 PR 11
Qу
              11
Db
            5 PR 6
RESULT 29
Q47420
                                   PRT;
ID
     Q47420
                 PRELIMINARY;
                                           11 AA.
AC
     Q47420;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     ORF11 protein.
     Escherichia coli.
OS
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OC
OX
     NCBI TaxID=562;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=K12;
     MEDLINE=92041688; PubMed=1657895;
RX
RA
     Sharples G.J., Lloyd R.G.;
     "Resolution of Holliday junctions in Escherichia coli: Identification
RT
```

```
of the ruvC gene product as a 19-Kilodalton protein.";
RT
     J. Bacteriol. 173:7711-7715(1991).
RL
    EMBL; X59551; CAA42127.1; -.
DR
     PIR; S19015; S19015.
DR
               11 AA; 1215 MW; DD8D6D4D56C6D33D CRC64;
SO
     SEQUENCE
                          18.2%; Score 2; DB 2; Length 11;
 Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
            9 RP 10
Qу
             | | |
           2 RP 3
Db
RESULT 30
044090
                                   PRT;
                                           11 AA.
ID
     Q44090
                 PRELIMINARY;
     Q44090;
AC
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DТ
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Hypothetical export segment (Fragment).
DE
     Acholeplasma laidlawii.
OS
     Bacteria; Firmicutes; Mollicutes; Acholeplasmatales;
OC
     Acholeplasmataceae; Acholeplasma.
OC
     NCBI TaxID=2148;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=A-EF22;
     Boyer M.J., Jarhede T.K., Tegman V., Wieslander A.;
RA
     "Sequence regions from Acholeplasma laidlawii which restore export of
RT
RT
     beta-lactamase in Escherichia coli.";
RL
     Submitted (JUN-1993) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; Z22875; CAA80495.1; -.
DR
     PIR; S33519; S33519.
FT
     NON TER
                  11
                         11
SO
     SEQUENCE
                11 AA; 1234 MW; 5C9D2AE8A682C337 CRC64;
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            4 KK 5
Qy
              | \cdot |
            2 KK 3
Db
RESULT 31
056413
                 PRELIMINARY;
                                   PRT;
                                            11 AA.
ID
     056413
AC
     056413;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
ĎΨ
     IS602L region DNA, 5' end (Fragment).
DE
OS
     Escherichia coli.
```

```
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
OC
     Enterobacteriaceae; Escherichia.
OX
    NCBI TaxID=562;
     [1]
RN
RP
     SEQUENCE FROM N.A.
     TRANSPOSON=Transposon Tn602;
RC
    MEDLINE=87318208; PubMed=2819910;
RX
     Stibitz S., Davies J.E.;
RA
     "Tn602: A naturally occurring relative of Tn903 with direct repeats.";
RT
RL
     Plasmid 17:202-209(1987).
     EMBL; M22735; AAA27464.1; -.
DR
    NON TER
FT
                  1
                          1
                  11
                         11
FT
    NON TER
     SEQUENCE
                11 AA; 1361 MW; 447E8354A05339C3 CRC64;
SO
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
             2; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
            2 TN 3
Qy
              \Box
            8 TN 9
Db
RESULT 32
047059
ID
     047059
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
     047059;
AC
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE
     Acetyl ornithine deacetylase (Fragment).
GN
    ARGE.
OS
     Escherichia coli.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
OC
     Enterobacteriaceae; Escherichia.
OX
     NCBI TaxID=562;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=83064529; PubMed=6292860;
RX
RA
     Charlier D., Piette J., Glansdorff N.;
     "IS3 can function as a mobile promoter in E. coli.";
RT
     Nucleic Acids Res. 10:5935-5948(1982).
RL
     EMBL; J01589; AAA23485.1; -.
DR
     PIR; I41138; I41138.
DR
FT
     NON TER
                  11
                         11
                11 AA; 1181 MW; 93F0429162C05731 CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            2; Conservative 0; Mismatches
            6 TG 7
Qу
              -11
Db
            9 TG 10
```

```
RESULT 33
O8GMU3
                                    PRT:
                                            11 AA.
                 PRELIMINARY;
     Q8GMU3
ID
     Q8GMU3;
AC
     01-MAR-2003 (TrEMBLrel. 23, Created)
DТ
DT
     01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Putative catalase isozyme (Fragment).
DE
     KATA.
GN
OS
     Acinetobacter lwoffii.
     Plasmid pKLH202.
OG
     Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC
OC
     Moraxellaceae; Acinetobacter.
OX
     NCBI TaxID=28090;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=TC108;
     Kholodii G.Y., Yurieva O.V., Mindlin S.Z., Gorlenko Z.M.,
RA
RA
     Nikiforov V.G.;
     "pKLH2-like aberrant transposons and possible mechanisms of their
RT
     dissemination.";
RT
     Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AJ250245; CAC80800.1; -.
DR
     GO; GO:0046821; C:extrachromosomal DNA; IEA.
DR
KW
     Plasmid.
FT
     NON TER
                  11
SO
     SEOUENCE
                11 AA; 1233 MW; 81A15757B333276A CRC64;
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
  Matches
             2: Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            4 KK 5
              II
Db
            6 KK 7
RESULT 34
P83537
     P83537
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
ID
AC
     P83537;
     01-JUN-2003 (TrEMBLrel. 24, Created)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Unknown protein from 2D-page (Fragment).
DΕ
     Lactobacillus sanfranciscensis (Lactobacillus sanfrancisco).
OS
OC
     Bacteria; Firmicutes; Lactobacillales; Lactobacillaceae;
OC
     Lactobacillus.
     NCBI TaxID=1625;
OX
RN
     [1]
RP
     SEQUENCE, AND INDUCTION.
RC
     STRAIN=DSM 20451;
RX
     PubMed=12112860;
     Drews O., Weiss W., Reil G., Parlar H., Wait R., Goerg A.;
RA
     "High pressure effects step-wise altered protein expression in
RT
     Lactobacillus sanfranciscensis.";
RT
     Proteomics 2:765-774(2002).
RL
```

```
-!- INDUCTION: BY ELEVATED HYDROSTATIC PRESSURE.
CC
     -!- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED MW OF THIS UNKNOWN
CC
CC
         PROTEIN IS: 65 KDA.
FT
     NON TER
                  1
                          1
FT
     NON TER
                  11
                         11
     SEQUENCE
                11 AA; 1249 MW; D96C8231B771ADD9 CRC64;
SO
                          18.2%; Score 2; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
            2; Conservative 0; Mismatches
                                                                             0;
  Matches
                                                 0;
                                                      Indels
                                                                 0; Gaps
            1 AT 2
Qу
             -11
            5 AT 6
Db
RESULT 35
Q9NY38
                                   PRT:
                                           11 AA.
                 PRELIMINARY;
ID
     Q9NY38
AC
     Q9NY38;
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DT
     Heavy metal-responsive transcription factor (Fragment).
DΕ
GN
     MTF-1.
     Homo sapiens (Human).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
     NCBI TaxID=9606;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     Auf der Maur A., Belser T., Wang Y., Gunes C., Lichtlen P.,
RA
RA
     Georgiev O., Schaffner W.;
RT
     "Characterization of the mouse gene for the heavy metal-responsive
RT
     transcription factor MTF-1.";
     Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AJ251881; CAB71327.1; -.
DR
FT
     NON TER
                  1
                          1
     NON TER
                  11
                         11
FT
     SEQUENCE
                11 AA; 1099 MW; A8653693773772C6 CRC64;
SO
                          18.2%; Score 2; DB 4; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                0; Mismatches
                                                   0;
                                                      Indels
                                                                  0; Gaps
                                                                              0;
  Matches
             2; Conservative
            7 GR 8
Qу
              +
            8 GR 9
Db
RESULT 36
060761
                                   PRT;
                                           11 AA.
                 PRELIMINARY;
ID
     060761
AC
     060761:
     01-AUG-1998 (TrEMBLrel. 07, Created)
DT
     01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
```

```
DE
     NPT-1 protein (Fragment).
GN
     NPT-1.
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     MEDLINE=98207718; PubMed=9545579;
RX
     Taketani Y., Miyamoto K., Chikamori M., Tanaka K., Yamamoto H.,
RA
     Tatsumi S., Morita K., Takeda E.;
RA
     "Characterization of the 5' flanking region of the human NPT-1
RT
     Na+/phosphate cotransporter gene.";
RT
     Biochim. Biophys. Acta 1396:267-272(1998).
RL
     EMBL; D83236; BAA25645.1; -.
DR
                  11
                          11
FT
     NON TER
                11 AA; 1358 MW; 884E2D4E6734044A CRC64;
SO
     SEOUENCE
                           18.2%; Score 2; DB 4; Length 11;
  Query Match
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                               0;
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                   0; Gaps
  Matches
            4 KK 5
Qу
              11
           10 KK 11
Db
RESULT 37
Q9H4H5
                                    PRT;
                                            11 AA.
                 PRELIMINARY;
ID
     Q9H4H5
AC
     O9H4H5;
     01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT
DT
     01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DT
     DJ661I20.2 (Novel helicase C-terminal domain and SNF2 N-terminal
DE
     domains containing protein) (Fragment).
DE
     DJ620E11.1.
GN
     Homo sapiens (Human).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
     NCBI TaxID=9606;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RA
     Skuce C.:
     Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AL031669; CAC17164.2; -.
DR
                           1
FT
     NON TER
                   1
     NON TER
                   11
                          11
FT
                11 AA; 1420 MW;
                                   5EB2C32A3326D053 CRC64;
     SEQUENCE
SQ
                           18.2%; Score 2; DB 4; Length 11;
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                                0;
             2; Conservative 0; Mismatches 0; Indels
                                                                   0; Gaps
  Matches
             4 KK 5
Qу
               -11
             7 KK 8
 Db
```

```
RESULT 38
09UCR1
    Q9UCR1
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
ID
     Q9UCR1;
AC
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     AUTOTAXIN (Fragment).
DE
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC.
     NCBI TaxID=9606;
OX
RN
     [1]
RP
     SEQUENCE.
    MEDLINE=92129337; PubMed=1733949;
RX
     Stracke M.L., Krutzsch H.C., Unsworth E.J., Arestad A., Cioce V.,
RA
     Schiffmann E., Liotta L.A.;
RA
     "Identification, purification, and partial sequence analysis of
RT
     autotaxin, a novel motility-stimulating protein.";
RT
     J. Biol. Chem. 267:2524-2529(1992).
RL
                   1
                          1
     NON TER
FT
     NON TER
                         11
                  11
FT
                        1171 MW; 2723615AA0437737 CRC64;
     SEOUENCE
SO
                11 AA;
                          18.2%; Score 2; DB 4; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
                Conservative
                                0; Mismatches
            1 AT 2
Qу
            9 AT 10
Db
RESULT 39
O9UAR8
ID
     O9UAR8
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
AC
     Q9UAR8;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Sialokinin I preproprotein (Fragment).
DE
     Aedes aegypti (Yellowfever mosquito).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Aedes.
OC
OX
     NCBI TaxID=7159;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=Rockefeller/Red; TISSUE=Salivary gland;
RC
     MEDLINE=20099025; PubMed=10620041;
RX
     Beerntsen B.T., Champagne D.E., Coleman J.L., Campos Y.A., James A.A.;
RA
     "Characterization of the Sialokinin I gene encoding the salivary
RT
     vasodilator of the yellow fever mosquito, Aedes aegypti.";
RT
RL
     Insect Mol. Biol. 8:459-467(1999).
     EMBL; AF108100; AAD16884.1; -.
DR
     GO; GO:0007268; P:synaptic transmission; IEA.
DR
```

```
GO; GO:0007217; P:tachykinin signaling pathway; IEA.
DR
    InterPro; IPR002040; Tachy Neurokinin.
DR
    PROSITE; PS00267; TACHYKININ; 1.
DR
    NON TER
FT
                  1
                          1
                11 AA; 1203 MW; 8BADC77C6B59C33A CRC64;
SO
    SEQUENCE
                          18.2%; Score 2; DB 5; Length 11;
 Query Match
                         100.0%; Pred. No. 9.4e+04;
 Best Local Similarity
                                                                 0; Gaps
                                                                             0;
            2; Conservative 0; Mismatches 0; Indels
            6 TG 7
Qу
             2 TG 3
Db
RESULT 40
Q9NL65
                                   PRT;
                                           11 AA.
ID
    Q9NL65
                 PRELIMINARY;
    Q9NL65;
AC
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DT
    ASABF-delta (Fragment).
DE
    ASABF-DELTA.
GN
    Ascaris suum (Pig roundworm) (Ascaris lumbricoides).
OS
    Eukaryota; Metazoa; Nematoda; Chromadorea; Ascaridida; Ascaridoidea;
OC
    Ascarididae; Ascaris.
OC
    NCBI TaxID=6253;
OX
RN
     SEQUENCE FROM N.A.
RP
     Kato Y.;
RA
     "Ascaris suum asabf-delta gene, exon 2.";
RT
     Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AB029815; BAA89496.1; -.
FT
     NON TER
                  1
                          1
                  11
FT
     NON TER
                         11
                11 AA; 1187 MW; 8BADDOCD1EAB5861 CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 5; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
            6 TG 7
Qу
              - 1 1
            4 TG 5
Db
RESULT 41
P82698
                                   PRT;
                                           11 AA.
ID
     P82698
                 PRELIMINARY;
AC
     P82698;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Periviscerokinin-1 (LEM-PVK-1).
DE
     Leucophaea maderae (Madeira cockroach),
OS
     Nauphoeta cinerea (Cinereous cockroach) (Gray cockroach),
OS
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```
Blaptica dubia, and
OS
     Gromphadorina portentosa (Cockroach).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
     Blaberidae; Leucophaea.
OC
     NCBI TaxID=6988, 6990, 6982, 132935, 36953;
OX
RN
     SEQUENCE, FUNCTION, AND MASS SPECTROSCOPY.
RP
RC
     TISSUE=ABDOMINAL PERISYMPATHETIC ORGANS;
     MEDLINE=20307624; PubMed=10849006;
RX
     Predel R., Kellner R., Baggerman G., Steinmetzer T., Schoofs L.;
RA
     "Identification of novel periviscerokinins from single neurohaemal
RT
     release sites in insects. MS/MS fragmentation complemented by Edman
RT
     degradation.";
RT
     Eur. J. Biochem. 267:3869-3873(2000).
RL
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- MASS SPECTROMETRY: MW=1090.6; METHOD=MALDI.
CC
     GO; GO:0007218; P:neuropeptide signaling pathway; IEA.
DR
ΚW
     Neuropeptide; Amidation.
     MOD RES
                  11
                                  AMIDATION.
FT
     SEQUENCE
                11 AA; 1091 MW; 2C2D80E2D7605728 CRC64;
SQ
                          18.2%; Score 2; DB 5; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            7 GR 8
Qy
              11
Db
            9 GR 10
RESULT 42
P82699
TD
     P82699
                 PRELIMINARY;
                                   PRT:
                                           11 AA.
AC
     P82699;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Periviscerokinin-2 (LEM-PVK-2).
DF.
     Leucophaea maderae (Madeira cockroach),
OS
     Nauphoeta cinerea (Cinereous cockroach) (Gray cockroach),
OS
OS
     Blaberus craniifer,
     Blaptica dubia, and
OS
     Gromphadorina portentosa (Cockroach).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC.
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
     Blaberidae; Leucophaea.
OC
     NCBI TaxID=6988, 6990, 6982, 132935, 36953;
OX
RN
     SEQUENCE, FUNCTION, AND MASS SPECTROSCOPY.
RP
     TISSUE=ABDOMINAL PERISYMPATHETIC ORGANS;
RC
     MEDLINE=20307624; PubMed=10849006;
RX
     Predel R., Kellner R., Baggerman G., Steinmetzer T., Schoofs L.;
RA
     "Identification of novel periviscerokinins from single neurohaemal
RT
     release sites in insects. MS/MS fragmentation complemented by Edman
RТ
```

Blaberus craniifer,

OS

```
RT
     degradation.";
     Eur. J. Biochem. 267:3869-3873(2000).
RT.
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
CC
     -!- MASS SPECTROMETRY: MW=1102.6; METHOD=MALDI.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; IEA.
KW
     Neuropeptide; Amidation.
                                  AMIDATION.
FT
     MOD RES
                  11
                         11
     SEQUENCE
                11 AA;
                        1103 MW;
                                  2F4D9FFD85B05728 CRC64;
SQ
                          18.2%; Score 2; DB 5; Length 11;
 Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
             2; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0;
                                                                      Gaps
           10 PR 11
Qу
            9 PR 10
Db
RESULT 43
P82700
                                   PRT;
                                           11 AA.
ID
     P82700
                 PRELIMINARY;
AC
     P82700;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DΤ
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Periviscerokinin-3 (LEM-PVK-3).
DΕ
     Leucophaea maderae (Madeira cockroach),
OS
     Nauphoeta cinerea (Cinereous cockroach) (Gray cockroach),
OS
OS
     Blaberus craniifer,
     Blaptica dubia (Argentinian wood cockroach), and
OS
     Gromphadorina portentosa (Cockroach).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
OC
     Blaberidae; Leucophaea.
OX
     NCBI TaxID=6988, 6990, 6982, 132935, 36953;
RN
     SEQUENCE, FUNCTION, AND MASS SPECTROSCOPY.
RP
     TISSUE=ABDOMINAL PERISYMPATHETIC ORGANS;
RC
     MEDLINE=20307624; PubMed=10849006;
RX
     Predel R., Kellner R., Baggerman G., Steinmetzer T., Schoofs L.;
RA
     "Identification of novel periviscerokinins from single neurohaemal
RT
     release sites in insects. MS/MS fragmentation complemented by Edman
RT
     degradation.";
RT
     Eur. J. Biochem. 267:3869-3873(2000).
RL
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- MASS SPECTROMETRY: MW=1146.6; METHOD=MALDI.
CC
     GO; GO:0007218; P:neuropeptide signaling pathway; IEA.
DR
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1147 MW; 2F4D9FF2D7605698 CRC64;
SO
  Query Match
                          18.2%; Score 2; DB 5; Length 11;
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                               0; Mismatches
                                                                  0; Gaps
                                                                              0;
  Matches
             2; Conservative
                                                    0; Indels
```

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10 PR 11
Qу
              9 PR 10
Db
RESULT 44
086D32
                                    PRT;
                                             11 AA.
     Q86D32
                 PRELIMINARY;
ID
     Q86D32;
AC
     01-JUN-2003 (TrEMBLrel. 24, Created)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Histone H1 (Fragment).
DΕ
     Trypanosoma cruzi.
OS
     Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma.
OC
OX
     NCBI TaxID=5693;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=Dm28c;
RC
     MEDLINE=22557728; PubMed=12670512;
RX
     Sturm N.R., Vargas N.S., Westenberger S.J., Zingales B.,
RA
     Campbell D.A.;
ŖΑ
     "Evidence for multiple hybrid groups in Trypanosoma cruzi.";
RT
     Int. J. Parasitol. 33:269-279(2003).
RL
     EMBL; AF545075; AAP21903.1; -.
DR
FT
     NON TER
                  11
                          11
                11 AA; 1114 MW; CCC1B31E7772CDDD CRC64;
     SEQUENCE
SQ
                           18.2%; Score 2; DB 5; Length 11;
  Query Match
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative
                                  0; Mismatches
                                                      0; Indels
                                                                    0; Gaps
                                                                                 0;
  Matches
            4 KK 5
Qу
               11
Db
            9 KK 10
RESULT 45
Q86D31
                                     PRT;
                                             11 AA.
     Q86D31
                  PRELIMINARY;
TD
AC
     Q86D31;
     01-JUN-2003 (TrEMBLrel. 24, Created) 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     Histone H1 (Fragment).
     Trypanosoma cruzi.
OS
     Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma.
OC
OX
     NCBI TaxID=5693;
RN
     [1]
RP
     SEOUENCE FROM N.A.
RC
     STRAIN=Sylvio X10;
     MEDLINE=22557728; PubMed=12670512;
RX
     Sturm N.R., Vargas N.S., Westenberger S.J., Zingales B.,
RA
RA
     Campbell D.A.;
     "Evidence for multiple hybrid groups in Trypanosoma cruzi.";
RT
     Int. J. Parasitol. 33:269-279(2003).
RL
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DR

EMBL; AF545076; AAP21906.1; -.

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FT
    NON TER
                  11
                         11
                        1174 MW; CCD1B21E7772CDDD CRC64;
     SEQUENCE
                11 AA;
SQ
                          18.2%; Score 2; DB 5; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative 0; Mismatches
                                                                              0;
                                                  0: Indels
                                                                 0; Gaps
 Matches
            4 KK 5
Qу
              11
            9 KK 10
Db
RESULT 46
Q95PX6
                                           11 AA.
                                   PRT;
ID
     Q95PX6
                 PRELIMINARY;
AC
     095PX6;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     Hypothetical protein.
DF.
GN
     ZK1236.8.
     Caenorhabditis elegans.
OS
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
OC
     Rhabditidae; Peloderinae; Caenorhabditis.
OC
OX
     NCBI TaxID=6239;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Bristol N2;
RX
     MEDLINE=99069613; PubMed=9851916;
RA
     "Genome sequence of the nematode C. elegans: a platform for
RT
     investigating biology. The C. elegans Sequencing Consortium.";
RТ
     Science 282:2012-2018(1998).
RL
RN
     [2]
     SEQUENCE FROM N.A.
RP
     STRAIN=Bristol N2;
RC
     Favello A.;
RA
     "The sequence of C. elegans cosmid ZK1236.";
RТ
     Submitted (MAY-1993) to the EMBL/GenBank/DDBJ databases.
RL
RN
     [3]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Bristol N2;
     Waterston R.;
RA
     "Direct Submission.";
RT
     Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
     EMBL; L13200; AAL11108.1; -.
DR
DR
     WormPep; ZK1236.8; CE29629.
     Hypothetical protein.
KW
              11 AA; 1304 MW; DFA3510A25A76322 CRC64;
SO
     SEOUENCE
                          18.2%; Score 2; DB 5; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
             2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            4 KK 5
Qу
              11
Db
            8 KK 9
```

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RESULT 47
Q9TRW5
                 PRELIMINARY:
                                    PRT;
                                            11 AA.
ID
     Q9TRW5
AC
     Q9TRW5;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     25 kDa protein P25, peptide F4 (Fragment).
DE
     Bos taurus (Bovine).
os
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
     Bovidae; Bovinae; Bos.
OC
OX
     NCBI TaxID=9913;
RN
     [1]
     SEQUENCE.
RP
     MEDLINE=91372400; PubMed=1909972;
RX
     Takahashi M., Tomizawa K., Ishiguro K., Sato K., Omori A., Sato S.,
RA
     Shiratsuchi A., Uchida T., Imahori K.;
RA
     "A novel brain-specific 25 kDa protein (p25) is phosphorylated by a
RT
     Ser/Thr-Pro kinase (TPK II) from tau protein kinase fractions.";
RT
     FEBS Lett. 289:37-43(1991).
RL
FT
     NON TER
                   1
                           1
                  11
                         11
FТ
     NON TER
                                  CAF72DAF65A76AA9 CRC64;
     SEQUENCE
                11 AA;
                        1276 MW;
SQ
                           18.2%; Score 2; DB 6; Length 11;
  Query Match
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
             2; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                       Gaps
                                                                               0;
  Matches
            7 GR 8
Qу
              11
            8 GR 9
Dh
RESULT 48
Q9TRX0
                                            11 AA.
                 PRELIMINARY;
                                    PRT;
ID
     Q9TRX0
AC
     Q9TRX0;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     Lanosterol 14 alpha-demethylase, cytochrome P-45014DM (Fragment).
DE
     Sus scrofa (Pig).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OC
     NCBI TaxID=9823;
OX
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=91316123; PubMed=1859829;
     Sono H., Sonoda Y., Sato Y.;
RA
     "Purification and characterization of cytochrome P-45014DM (lanosterol
RT
     14 alpha-demethylase) from pig liver microsomes.";
RT
     Biochim. Biophys. Acta 1078:388-394(1991).
RL
FT
     NON TER
                   1
                           1
FT
     NON TER
                   11
                          11
```

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11 AA; 1084 MW; 8A7A5CBC2AA72861 CRC64;
SO
     SEQUENCE
                          18.2%; Score 2; DB 6; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                               0;
                                                                  0; Gaps
            2; Conservative
                                 0; Mismatches
                                                  0; Indels
            6 TG 7
Qу
              \mathbf{I}
            4 TG 5
Db
RESULT 49
077876
                 PRELIMINARY;
                                   PRT;
                                            11 AA.
ID
     077876
AC
     077876;
     01-NOV-1998 (TrEMBLrel. 08, Created)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     MHC class II B locus 1 (Fragment).
DE
     Oreochromis niloticus (Nile tilapia) (Tilapia nilotica).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
     Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroidei;
OC
     Cichlidae; Oreochromis.
OC
OX
     NCBI TaxID=8128;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     MEDLINE=98315113; PubMed=9649539;
RX
     Malaga-Trillo E., Zaleska-Rutczynska Z., McAndrew B., Vincek V.,
RA
     Figueroa F., Sultmann H., Klein J.;
RA
     "Linkage relationships and haplotype polymorphism among cichlid mhc
RT
     class II B loci.";
RT
     Genetics 149:1527-1537(1998).
RL
DR
     EMBL; AF049985; AAC41324.1; -.
FT
     NON TER
                   1
                          1
ТЧ
     NON TER
                  11
                         11
SQ
     SEQUENCE
                11 AA; 1178 MW; 9AC131FAB2D2DB45 CRC64;
                          18.2%; Score 2; DB 7; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0;
  Matches
            2; Conservative
            6 TG 7
Qу
              11
            8 TG 9
Db
RESULT 50
Q29831
ID
     029831
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
AC
     029831;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DΤ
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     Gene fragment encoding human histocompatibility antigen HLA-DR alpha
DE
DF.
     (exon 2).
OS
     Homo sapiens (Human).
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
    NCBI TaxID=9606;
OX
RN
RP
     SEQUENCE FROM N.A.
RX
    MEDLINE=83169718; PubMed=6403940;
     Das H.K., Biro P.A., Cohen S.N., Erlich H.A., von Gabain A.,
RA
     Lawrance S.K., Lemaux P.G., McDevitt H.O., Peterlin B.M., Schulz M.F.,
RA
     Sood A.K., Weissman S.M.;
RA
RT
     "Use of synthetic oligonucleotide probes complementary to genes for
     human HLA-DR alpha and beta as extension primers for the isolation of
RT
RT
     5' specific clones.";
     Proc. Natl. Acad. Sci. U.S.A. 80:1531-1535(1983).
RL
     EMBL; V00525; CAA23784.1; -.
DR
     SEQUENCE 11 AA; 1230 MW; 9378714E0865B1EA CRC64;
SQ
 Query Match
                          18.2%; Score 2; DB 7; Length 11;
 Best Local Similarity 100.0%; Pred. No. 9.4e+04;
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
           7 GR 8
Qy
             \perp
Db
           7 GR 8
RESULT 51
019718
                PRELIMINARY;
                                   PRT:
                                           11 AA.
ID
    019718
AC
     019718;
     01-JAN-1998 (TrEMBLrel. 05, Created)
DT
     01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
חידי
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     MHC class II antigen (Fragment).
GN
     HLA-DRB1.
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI_TaxID=9606;
RN
     [1]
     SEQUENCE FROM N.A.
RP
    MEDLINE=86206008; PubMed=3458223;
RX
     Gregersen P.K., Shen M., Song Q.-L., Merryman P., Degar S., Seki T.,
RA
     Maccari J., Goldberg D., Murphy H., Schwenzer J., Wang C.Y.,
RA
     Winchester R.J., Nepom G.T., Silver J.;
RA
     "Molecular diversity of HLA-DR4 haplotypes.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 83:2642-2646(1986).
RL
     EMBL; M15074; AAA59810.1; -.
DR
FT
     NON TER
                   1
                          1
               11 AA; 1143 MW; 4E6AADA061B776D7 CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 7; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
                                                                             0;
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
 Matches
            6 TG 7
Qу
              | | |
            7 TG 8
Db
```

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RESULT 52
Q94VG8
ID
     Q94VG8
                  PRELIMINARY;
                                     PRT;
                                             11 AA.
AC
     094VG8;
     01-DEC-2001 (TrEMBLrel. 19, Created)
חיים
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     COI.
     Varanus gouldii (Gould's monitor).
OS
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC.
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
     NCBI TaxID=62042;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Ast J.C.;
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RT
     Cladistics 17:0-0(2001).
RL
     EMBL; AF407502; AAL10060.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
     Mitochondrion.
     NON TER
FT
                  11
                          11
     SEQUENCE
                11 AA; 1370 MW;
                                    8E6DEE80C7336411 CRC64;
SO
                           18.2%; Score 2; DB 8; Length 11;
  Query Match
                           100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                   0; Mismatches
                                                      0; Indels
                                                                     0; Gaps
                                                                                  0;
             2; Conservative
            2 TN 3
Qy
               \mathbf{1}
Db
           10 TN 11
RESULT 53
Q9G5Y6
                  PRELIMINARY;
                                     PRT;
                                             11 AA.
ID
     Q9G5Y6
AC
     Q9G5Y6;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DТ
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update) 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GΝ
     Agama agama (Red-headed rock agama).
OS
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Agaminae; Agama.
OC
OX
     NCBI TaxID=103336;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RX
     MEDLINE=22114082; PubMed=12118408;
     Macey J.R., Schulte J.A. II, Larson A.;
RA
     "Evolution and information content of the mitochondrial genomic
RT
     structural features illustrated with acrodont lizards.";
RT
     Syst. Biol. 49:257-277(2000).
RL
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RN
     [2]
     SEQUENCE FROM N.A.
RP
    MEDLINE=22114081; PubMed=12118407;
RX
     Macey J.R., Schulte J.A. II, Larson A., Ananjeva N.B., Wang Y.,
RA
     Pethiyagoda R., Rastegar-Pouyani N., Papenfuss T.J.;
RA
     "Evaluating Trans-Tethys migration: An example using Acrodont lizard
RT
     phylogenetics.";
RT
     Syst. Biol. 49:233-256(2000).
RL
     EMBL; AF128504; AAG00749.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
DR
     Mitochondrion.
KW
     NON TER
                  11
                         11
FT
     SEQUENCE
                        1324 MW;
                                  9D52EC1E336415A1 CRC64;
SQ
                11 AA;
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
             2; Conservative 0; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                 0;
                                                       Indels
  Matches
            5 KT 6
Qv
              -1.1
            3 KT 4
Db
RESULT 54
09G679
     Q9G679
                                           11 AA.
                 PRELIMINARY;
                                   PRT:
ID
AC
     Q9G679;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
OS
     Hypsilurus dilophus (Twin-crested anglehead dragon).
OG
     Mitochondrion.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Amphibolurinae;
OC
OC
     Hypsilurus.
OX
     NCBI TaxID=118208;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=22114082; PubMed=12118408;
RX
     Macey J.R., Schulte J.A. II, Larson A.;
RA
     "Evolution and information content of the mitochondrial genomic
RT
     structural features illustrated with acrodont lizards.";
RT
RL
     Syst. Biol. 49:257-277(2000).
RN
     [2]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=22114081; PubMed=12118407;
     Macey J.R., Schulte J.A. II, Larson A., Ananjeva N.B., Wang Y.,
RA
     Pethiyagoda R., Rastegar-Pouyani N., Papenfuss T.J.;
RA
     "Evaluating Trans-Tethys migration: An example using Acrodont lizard
RT
RT
     phylogenetics.";
     Syst. Biol. 49:233-256(2000).
RL
DR
     EMBL; AF128466; AAG00635.1; -.
     GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
     Mitochondrion.
FT
     NON TER
                  11
                          11
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11 AA; 1309 MW; 85F7371E33640451 CRC64;
SO
     SEOUENCE
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
 Matches
            2 TN 3
Qу
              4 TN 5
Db
RESULT 55
094VI5
                                           11 AA.
                                   PRT;
ID
     094VI5
                 PRELIMINARY;
AC
     094VI5;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     COT.
     Varanus exanthematicus.
OS
OG
     Mitochondrion.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
     NCBI TaxID=8557;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Ast J.C.;
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RT
     Cladistics 17:0-0(2001).
RL
     EMBL; AF407496; AAL10043.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
     Mitochondrion.
     NON TER
                         11
FT
                  11
                11 AA; 1382 MW; 8A26C780C7336411 CRC64;
     SEQUENCE
SO
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
                               0; Mismatches
                                                    0; Indels
             2; Conservative
  Matches
            2 TN 3
Qу
              \perp
           10 TN 11
Db
RESULT 56
094V74
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
     Q94V74
ΙD
     094V74;
AC
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DΤ
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     COI.
     Lanthanotus borneensis.
OS
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
```

```
Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Lanthanotidae;
OC
     Lanthanotus.
OC
    NCBI TaxID=62058;
OX
RN
     SEOUENCE FROM N.A.
RΡ
    Ast J.C.;
RA
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RT
RL
    Cladistics 17:0-0(2001).
     EMBL; AF407541; AAL10175.1; -.
DR
    GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
    Mitochondrion.
FT
    NON TER
                 11
                        11
     SEQUENCE
               11 AA; 1388 MW; 8F28EE80C7336411 CRC64;
SO
                         18.2%; Score 2; DB 8; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 9.4e+04;
                                                                             0;
          2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
 Matches
           2 TN 3
QУ
             10 TN 11
Db
RESULT 57
O9GH12
                PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
    Q9GH12
AC
     09GH12;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DТ
     Photosystem II CP43 apoprotein (Fragment).
DE
GN
     PSBC.
os
     Pandorina morum.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
OC
OC
     Volvocaceae; Pandorina.
OX
     NCBI TaxID=33099;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=UTEX 2326;
RC
     MEDLINE=20538271; PubMed=11083939;
RX
     Nozaki H., Misawa K., Kajita T., Kato M., Nohara S., Watanabe M.M.;
RA
     "Origin and Evolution of the Colonial Volvocales (Chlorophyceae) as
RT
     Inferred from Multiple, Chloroplast Gene Sequences.";
RT
     Mol. Phylogenet. Evol. 17:256-268(2000).
RL
     EMBL; AB044506; BAB18432.1; -.
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
                   1
                          1
     NON TER
FT
                  11
                         11
                11 AA; 1140 MW; 04E525247731ADD0 CRC64;
SO
     SEOUENCE
                          18.2%; Score 2; DB 8; Length 11;
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
                                                                             0;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
  Matches
Qу
           1 AT 2
```

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RESULT 58
094VE7
                                            11 AA.
                 PRELIMINARY;
                                   PRT;
ΙD
     Q94VE7
AC
     Q94VE7;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     Varanus komodoensis (Komodo dragon).
OS
OG
     Mitochondrion.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
     NCBI TaxID=61221;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RA
     Ast J.C.;
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RT
     Cladistics 17:0-0(2001).
RL
     EMBL; AF407510; AAL10084.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
DR
ΚW
     Mitochondrion.
FT
     NON TER
                  11
                         11
                11 AA; 1370 MW; 8E6DEE80C7336411 CRC64;
     SEQUENCE
SO
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
  Matches
             2; Conservative
                               0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            2 TN 3
Qу
              11
Db
           10 TN 11
RESULT 59
Q94VB8
                                    PRT;
                                            11 AA.
ID
     Q94VB8
                 PRELIMINARY;
AC
     Q94VB8;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     Varanus salvadorii (Crocodile monitor).
OS
OG
     Mitochondrion.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
OX
     NCBI TaxID=62049;
RN
RP
     SEOUENCE FROM N.A.
RA
     Ast J.C.;
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RТ
RL
     Cladistics 17:0-0(2001).
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EMBL; AF407522; AAL10119.1; -.
DR
    GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
    Mitochondrion.
FT
    NON TER
                  11
                         11
                11 AA; 1370 MW;
     SEQUENCE
                                  8E6DEE80C7336411 CRC64;
SO
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
             2; Conservative
                                0; Mismatches 0; Indels
                                                                  0; Gaps
 Matches
            2 TN 3
Qy
              11
           10 TN 11
Db
RESULT 60
Q94VH7
                                   PRT;
                                           11 AA.
                 PRELIMINARY;
     Q94VH7
ID
AC
     094VH7:
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
     COI.
GN
     Varanus gilleni (Pygmy mulga monitor).
OS
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
     NCBI TaxID=169840;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RA
     Ast J.C.;
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
RT
RL
     Cladistics 17:0-0(2001).
DR
     EMBL; AF407499; AAL10051.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
KW
     Mitochondrion.
FT
     NON TER
                  11
                         11
                11 AA; 1340 MW; CF6DEE80C733640D CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
             2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            2 TN 3
Qу
              11
           10 TN 11
Db
RESULT 61
094VK1
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
     Q94VK1
ID
AC
     094VK1;
DT
     01-DEC-2001 (TrEMBLrel. 19, Created)
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
```

```
GN
OS
    Varanus acanthurus (Ridge-tailed monitor).
    Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Varanidae; Varanus.
OC
OX
    NCBI TaxID=62035;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RA
    Ast J.C.;
RT
     "Mitochondrial DNA evidence and evolution in Varanoidea (Squamata).";
     Cladistics 17:0-0(2001).
RT.
     EMBL; AF407488; AAL10021.1; -.
DR
     GO; GO:0005739; C:mitochondrion; IEA.
DR
KW
    Mitochondrion.
    NON TER
FT
                         11
                 11
     SEQUENCE
                11 AA; 1370 MW;
                                  8E6DEE80C7336411 CRC64;
SO
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
            2 TN 3
Qу
              | | |
           10 TN 11
Db
RESULT 62
Q7YKD8
ID
     Q7YKD8
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
AC
     Q7YKD8;
     01-OCT-2003 (TrEMBLrel. 25, Created)
DТ
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DE
     Photosystem Q(B) protein (Fragment).
GN
     PSBA.
OS
     Ribes oxyacanthoides subsp. setosum.
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
OC
     Saxifragales; Grossulariaceae; Ribes.
OC
     NCBI TaxID=175229;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Schultheis L.M., Donoghue M.J.;
RA
     "Molecular phylogenetic analyses of Ribes (Grossulariaceae) with an
RT
     emphasis on gooseberries (subg. Grossularia).";
RT
     Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AY138075; AAP92230.1; -.
DR
KW
     Chloroplast.
FT
     NON TER
                   1
     SEQUENCE
                11 AA; 1040 MW;
                                 E0210AC9A76DDB0A CRC64;
SO
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                               0; Mismatches
                                                   0; Indels
  Matches
            2; Conservative
                                                                  0; Gaps
Qy
            2 TN 3
```

```
Db 9 TN 10
```

```
RESULT 63
Q7YKC6
     Q7YKC6
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
TD
AC
     Q7YKC6;
     01-OCT-2003 (TrEMBLrel. 25, Created)
DT
DT
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DΕ
     Photosystem Q(B) protein (Fragment).
GN
     Ribes cereum.
OS
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
     Saxifragales; Grossulariaceae; Ribes.
OC
     NCBI TaxID=175189;
ΟX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     Schultheis L.M., Donoghue M.J.;
RA
     "Molecular phylogenetic analyses of Ribes (Grossulariaceae) with an
RT
     emphasis on gooseberries (subg. Grossularia).";
RT
RL
     Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
     EMBL; AY138087; AAP92242.1; -.
DR
     Chloroplast.
KW
FT
     NON TER
                   1
                           1
     SEQUENCE
                        1029 MW; D6210AC9A76DDB02 CRC64;
SO
                11 AA;
                           18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
  Matches
             2; Conservative
                                  0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0:
            2 TN 3
Qу
              \perp
Db
            9 TN 10
RESULT 64
Q7YKA6
ID
     Q7YKA6
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
AC
     Q7YKA6;
     01-OCT-2003 (TrEMBLrel. 25, Created)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
     Photosystem Q(B) protein (Fragment).
DΕ
     PSBA.
GN
os
     Itea ilicifolia.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
OC
OC
     Saxifragales; Iteaceae; Itea.
OX
     NCBI TaxID=96938;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Schultheis L.M., Donoghue M.J.;
```

```
"Molecular phylogenetic analyses of Ribes (Grossulariaceae) with an
RТ
     emphasis on gooseberries (subg. Grossularia).";
RT
     Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AY138111; AAP92264.1; -.
KW
     Chloroplast.
     NON TER
FT
                   1
                          1
     SEQUENCE
                        1029 MW; D6210AC9A76DDB02 CRC64;
SQ
                11 AA;
                          18.2%; Score 2; DB 8; Length 11;
 Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                               0;
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
 Matches
             2; Conservative
            2 TN 3
Qy
            9 TN 10
Db
RESULT 65
Q7Y9D1
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
ID
     07Y9D1
AC
     07Y9D1;
     01-OCT-2003 (TrEMBLrel. 25, Created)
DТ
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
     COI.
os
     Tympanocryptis houstoni.
OG
     Mitochondrion.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Amphibolurinae;
OC
OC
     Tympanocryptis.
     NCBI_TaxID=206611;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=22653719; PubMed=12769459;
     Schulte J.A. II, Melville J., Larson A.;
RA
     "Molecular phylogenetic evidence for ancient divergence of lizard taxa
RT
RT
     on either side of Wallace's Line.";
RL
     Proc. R. Soc. Lond., B, Biol. Sci. 270:597-603(2003).
     EMBL; AY133028; AAN15907.1; -.
DR
KW
     Mitochondrion.
FT
     NON TER
                  11
                         11
                                  85F7371E33640451 CRC64;
SQ
     SEQUENCE
                11 AA;
                        1309 MW;
                                   Score 2; DB 8; Length 11;
  Query Match
                          18.2%;
  Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
                                                    0; Indels
                                                                       Gaps
                                                                               0;
  Matches
             2; Conservative
                                 0; Mismatches
            2 TN 3
Qу
              11
            4 TN 5
Db
RESULT 66
Q7Y9B6
ID
     Q7Y9B6
                 PRELIMINARY;
                                    PRT;
                                            11 AA.
AC
     Q7Y9B6;
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01-OCT-2003 (TrEMBLrel. 25, Created)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DТ
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     Cytochrome c oxidase subunit I (Fragment).
DE
GN
OS
     Amphibolurus nobbi.
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Amphibolurinae;
OC
     Amphibolurus.
OC
     NCBI TaxID=206551;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
     MEDLINE=22653719; PubMed=12769459;
RX
     Schulte J.A. II, Melville J., Larson A.;
RA
     "Molecular phylogenetic evidence for ancient divergence of lizard taxa
RT
     on either side of Wallace's Line.";
RT
     Proc. R. Soc. Lond., B, Biol. Sci. 270:597-603(2003).
RL
     EMBL; AY132999; AAN15820.1; -.
DR
     Mitochondrion.
KW
     NON TER
                  11
                         11
FT
                11 AA; 1309 MW; 85F7371E33640451 CRC64;
SO
     SEQUENCE
                          18.2%; Score 2; DB 8; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
             2: Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
  Matches
            2 TN 3
Qy
              11
            4 TN 5
Db
RESULT 67
038415
ID
     Q38415
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
AC
     Q38415;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DТ
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Ant1 protein (Fragment).
DE
     Bacteriophage P7.
OS
     Viruses; dsDNA viruses, no RNA stage; Caudovirales; Myoviridae;
OC
     P1-like viruses.
OC
     NCBI TaxID=10682;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=90335968; PubMed=1696181;
RX
     Citron M., Schuster H.;
RA
     "The c4 repressors of bacteriophages P1 and P7 are antisense RNAs.";
RT
RL
     Cell 62:591-598(1990).
RN
     [2]
     SEQUENCE FROM N.A.
RP
     MEDLINE=92319637; PubMed=1620606;
RX
RA
     Citron M., Schuster H.;
     "The c4 repressor of bacteriophage P1 is a processed 77 base antisense
RT
RT
     RNA.";
     Nucleic Acids Res. 20:3085-3090(1992).
RL
```

```
EMBL; M35139; AAA32437.1; -.
DR
DR
     PIR; S42449; S42449.
     NON TER
FT
                  11
                         11
     SEQUENCE
                11 AA; 1315 MW; 38A55C6D11B2C737 CRC64;
SQ
                          18.2%; Score 2; DB 9; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
  Matches
            2; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
            4 KK 5
Qу
              Db
            2 KK 3
RESULT 68
Q37925
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
     Q37925
AC
     Q37925;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DТ
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Bacteriophage fr replicase (Fragment).
     Bacteriophage fr.
OS
     Viruses; ssRNA positive-strand viruses, no DNA stage; Leviviridae;
OC
OC
     Levivirus.
OX
    NCBI TaxID=12017;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     Berzin V.M., Gribanov V.A., Cielens I.E., Jansone I.V., Gren E.J.;
RA
     "The nucleotide sequence of the regulatory region of phage fr
RT
RT
     replicase cistron.";
     Bioorg. Khim. 7:306-308(1981).
RL
DR
     EMBL; M34834; AAA32193.1; -.
FT
     NON TER
                 11
                         11
SO
     SEQUENCE
                11 AA; 1285 MW; 8BD43470C33321B1 CRC64;
  Query Match
                          18.2%; Score 2; DB 9;
                                                   Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 9.4e+04;
  Matches
            2; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            5 KT 6
Qу
              11
            3 KT 4
Db
RESULT 69
Q06626
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
     Q06626
AC
     Q06626;
DТ
     01-NOV-1996 (TrEMBLrel. 01, Created)
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Patatin A gene protein (Fragment).
GN
     PATATIN A GENE.
OS
     Solanum tuberosum (Potato).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
```

```
OC
     lamiids; Solanales; Solanaceae; Solanum.
     NCBI_TaxID=4113;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RX
     MEDLINE=93081729; PubMed=1450383;
     Nap J.P., Dirkse W.G., Louwerse J., Onstenk J., Visser R., Loonen A.,
RA
     Heidekamp F., Stiekema W.J.;
RA
     "Analysis of the region in between two closely linked patatin genes:
RT
     class II promoter activity in tuber, root and leaf.";
RT
     Plant Mol. Biol. 20:683-694(1992).
RL
     EMBL; S51460; AAB24400.1; -.
DR
     NON TER
FT
                   1
                          1
                11 AA; 1301 MW; 95577379DB1B1451 CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 10; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 TN 3
Qу
             11
Db
            4 TN 5
RESULT 70
Q9T0L9
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
     09T0L9
AC
     Q9T0L9;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DТ
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     SLG5 protein (Fragment).
DF.
GN
     SLG5.
OS
     Brassica oleracea (Cauliflower).
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
OC
     eurosids II; Brassicales; Brassicaceae; Brassica.
OX
     NCBI TaxID=3712;
RN
     [1]
     SEOUENCE FROM N.A.
RP
     MEDLINE=99264316; PubMed=10330480;
RX
     Cabrillac D., Delorme V., Garin J., Ruffio-Chable V., Giranton J.L.,
RA
     Dumas C., Gaude T., Cock J.M.;
RA
     "The S15 self-incompatibility haplotype in Brassica includes three S
RT
     gene family members which are expressed in stigmas.";
RT
     Plant Cell 11:971-986(1999).
RL
     EMBL; Y18256; CAB41875.1; -.
DR
     NON TER
                   1
FT
                11 AA; 1035 MW; CD3806DDA8772AAD CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 10; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
            2; Conservative
                                                                  0; Gaps
                                                                              0;
                               0; Mismatches
                                                   0; Indels
  Matches
            6 TG 7
Qy
              11
           10 TG 11
Db
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RESULT 71
Q8RUE7
                                            11 AA.
                                    PRT;
ID
     Q8RUE7
                 PRELIMINARY;
AC
     O8RUE7;
     01-JUN-2002 (TrEMBLrel. 21, Created)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     Alcohol dehydrogenase (Fragment).
DE
     ADH1.
GN
OS
     Zea mays (Maize).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC
     PACCAD clade; Panicoideae; Andropogoneae; Zea.
OC.
OX
     NCBI TaxID=4577;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=Various strains;
RC.
     Ching A.S., Caldwell K.S., Jung M., Dolan M., Smith O.S., Tingey S.,
RA
     Morgante M., Rafalski J.A.;
RA
     "SNP frequency, haplotype structure and linkage disequilibrium in
RT
     elite maize inbred lines.";
RT
     Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AF496880; AAM16120.1; -.
     EMBL; AF496881; AAM16121.1; -.
DR
     EMBL; AF496882; AAM16122.1; -.
DR
     EMBL; AF496883; AAM16123.1; -.
DR
     EMBL; AF496884; AAM16124.1; -.
DR
     EMBL; AF496885; AAM16125.1; -.
DR
DR
     EMBL; AF496886; AAM16126.1; -.
     EMBL; AF496887; AAM16127.1; -.
DR
     EMBL; AF496888; AAM16128.1; -.
DR
DR
     EMBL; AF496889; AAM16129.1; -.
DR
     EMBL; AF496890; AAM16130.1; -.
DR
     EMBL; AF496891; AAM16131.1; -.
     EMBL; AF496892; AAM16132.1; -.
DR
DR
     EMBL; AF496893; AAM16133.1; -.
DR
     EMBL; AF496894; AAM16134.1; -.
DR
     EMBL; AF496895; AAM16135.1; -.
     EMBL; AF496896; AAM16136.1; -.
DR
     EMBL; AF496897; AAM16137.1; -.
DR
DR
     EMBL; AF496898; AAM16138.1; -.
     EMBL; AF496899; AAM16139.1; -.
DR
DR
     EMBL; AF496900; AAM16140.1; -.
DR
     EMBL; AF496901; AAM16141.1; -.
DR
     EMBL; AF496902; AAM16142.1; -.
DR
     EMBL; AF496903; AAM16143.1; -.
     EMBL; AF496904; AAM16144.1; -.
DR
DR
     EMBL; AF496905; AAM16145.1; -.
DR
     EMBL; AF496906; AAM16146.1; -.
DR
     EMBL; AF496907; AAM16147.1; -.
DR
     EMBL; AF496908; AAM16148.1; -.
DR
     EMBL; AF496909; AAM16149.1; -.
     EMBL; AF496910; AAM16150.1; -.
DR
DR
     EMBL; AF496911; AAM16151.1; -.
FT
     NON TER
                  11
                          11
                11 AA; 1149 MW; D66AE90942C3387D CRC64;
SQ
     SEQUENCE
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18.2%; Score 2; DB 10; Length 11;
  Query Match
  Best Local Similarity
                           100.0%; Pred. No. 9.4e+04;
                                                                                 0:
  Matches
             2; Conservative 0; Mismatches
                                                        Indels
                                                                    0;
                                                                        Gaps
                                                     0;
            1 AT 2
Qу
              11
            2 AT 3
Db
RESULT 72
Q04131
ΙD
     Q04131
                  PRELIMINARY;
                                    PRT;
                                             11 AA.
AC
     Q04131;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Wound induced protein (Fragment).
DΕ
     Lycopersicon esculentum (Tomato).
os
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Solanaceae; Solanum.
OC
OX
     NCBI TaxID=4081;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=pik-red; TISSUE=Pericarp;
     MEDLINE=91355936; PubMed=1715787;
RX
RA
     Parsons B.L., Mattoo A.K.;
     "Wound regulated accumulation of specific transcripts in tomato fruit:
RT
RT
     interactions with fruit development, ethylene and light.";
RL
     Plant Mol. Biol. 17:453-464(1991).
DR
     EMBL; X59884; CAA42539.1; -.
DR
     PIR; S19775; S19775.
FT
     NON TER
SO
     SEQUENCE
                11 AA;
                        1278 MW; 92CB257828733325 CRC64;
  Query Match
                           18.2%; Score 2; DB 10; Length 11;
  Best Local Similarity
                           100.0%; Pred. No. 9.4e+04;
             2; Conservative
                                 0; Mismatches
                                                     0; Indels
                                                                    0; Gaps
                                                                                 0;
            4 KK 5
Qу
            5 KK 6
Db
RESULT 73
P83092
ID
     P83092
                  PRELIMINARY;
                                     PRT;
                                             11 AA.
AC
     P83092;
     01-OCT-2001 (TrEMBLrel. 18, Created)
DT
     01-OCT-2001 (TrEMBLrel. 18, Last sequence update) 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DT
DE
     33.6 kDa protein (Fragment).
     Spinacia oleracea (Spinach).
os
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
OC
     Caryophyllales; Amaranthaceae; Spinacia.
OC
```

```
NCBI TaxID=3562;
OX
     [1]
RN
     SEQUENCE, AND SUBCELLULAR LOCATION.
RP
     Schubert M., Peterson U., Funk C., Schroeder W.P., Kieselbach T.;
RA
     Submitted (AUG-2001) to Swiss-Prot.
RL
     -!- SUBCELLULAR LOCATION: CHLOROPLAST; WITHIN THE THYLAKOID LUMEN.
CC
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
    NON TER
FT
                  11
     SEQUENCE
                11 AA;
                        1274 MW; 95344C4D21AAB775 CRC64;
SQ
                          18.2%; Score 2; DB 10; Length 11;
 Query Match
                          100.0%; Pred. No. 9.4e+04;
 Best Local Similarity
                                0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
            2: Conservative
 Matches
           10 PR 11
Qу
              10 PR 11
Db
RESULT 74
07X9Y3
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
     Q7X9Y3
ID
AC
     07X9Y3;
     01-OCT-2003 (TrEMBLrel. 25, Created)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     CUM1 (Fragment).
DE
     CUM1.
GN
     Cucumis sativus (Cucumber).
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
     eurosids I; Cucurbitales; Cucurbitaceae; Cucumis.
OC
OX
     NCBI TaxID=3659;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RX
     MEDLINE=22667639; PubMed=12782724;
     Hong R.L., Hamaguchi L., Busch M.A., Weigel D.;
RA
     "Regulatory Elements of the Floral Homeotic Gene AGAMOUS Identified by
RT
     Phylogenetic Footprinting and Shadowing.";
RТ
     Plant Cell 15:1296-1309(2003).
RL
DR
     EMBL; AY254704; AAP35238.1; -.
     NON TER
FT
                   1
     NON TER
                  11
                         11
FT
                11 AA; 1280 MW; D3C7A05641ADD322 CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 10; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.4e+04;
                                                                  0; Gaps
                                                                              0;
            2; Conservative 0; Mismatches 0; Indels
  Matches
            1 AT 2
Qу
              11
Db
            6 AT 7
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RESULT 75 Q99JC3

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PRT;
                                           11 AA.
ID
     Q99JC3
                 PRELIMINARY;
AC
     099JC3;
     01-JUN-2001 (TrEMBLrel. 17, Created)
DT
     01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Luteinizing hormone/chorionic gonadotropin receptor homolog
DΕ
     (Fragment).
DE
os
     Rattus sp.
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OC
     NCBI TaxID=10118;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     TISSUE=Ovary;
     MEDLINE=96147985; PubMed=8571710;
RX
     Shen Q.X., Liu H.H., Chen W.Y., Bahl O.P.;
RA
     "[Cloning and overexpression of rat ovary LH/hCG receptor cDNA in
RT
RT
     insect cells].";
     Shih Yen Sheng Wu Hsueh Pao 28:283-290(1995).
RL
     EMBL; S80658; AAB50709.1; -.
DR
     GO; GO:0004872; F:receptor activity; IEA.
DR
     GO; GO:0005213; F:structural constituent of chorion (sensu In. . .; IEA.
DR
     Chorion; Receptor.
KW
     NON TER
                          1
                   1
FT
     NON TER
FT
                  11
                         11
     SEQUENCE
                11 AA;
                        994 MW; 333DCB137EB865B8 CRC64;
SO
                          18.2%; Score 2; DB 11; Length 11;
  Query Match
                          100.0%; Pred. No. 9.4e+04;
  Best Local Similarity
                                                                              0;
                                                                  0; Gaps
            2; Conservative 0; Mismatches 0; Indels
  Matches
            6 TG 7
Qу
              \mathbf{H}
Db
            3 TG 4
Search completed: April 8, 2004, 15:46:05
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Job time : 28.7692 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 8, 2004, 15:30:07; Search time 5.15385 Seconds

(without alignments)

111.135 Million cell updates/sec

Title: US-09-787-443A-9

Perfect score: 11

Sequence: 1 ATNKKTGRRPR 11

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 141681 seqs, 52070155 residues

Word size:

Total number of hits satisfying chosen parameters: 70

Minimum DB seq length: 11 Maximum DB seq length: 11

Post-processing: Listing first 100 summaries

Database: SwissProt 42:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

		웅 -				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
1	3	27.3	11	1	ASL2 BACSE	P83147 bacteroides
2	3	27.3	11	1	TKNA CHICK	P19850 gallus gall
3	2	18.2	11	1	BPP3 BOTIN	P30423 bothrops in
4	2	18.2	11	1	BPP4 BOTIN	P30424 bothrops in
5	2	18.2	11	1	BPPB AGKHA	P01021 agkistrodon
6	2	18.2	11	1	BPP AGKHP	P04562 agkistrodon
7	2	18.2	11	1	BRK MEGFL	P12797 megascolia
8	2	18.2	11	1	CA21 LITCI	P82087 litoria cit
9	2	18.2	11	1	CA22 LITCI	P82088 litoria cit
10	2	18.2	11	1	CA31 LITCI	P82089 litoria cit
11	2	18.2	11	1	CA32 LITCI	P82090 litoria cit
12	2	18.2	11	1	CA41 LITCI	P82091 litoria cit
13	2	18.2	11	1	CA42 LITCI	P82092 litoria cit
14	2	18.2	11	1	CEP1 ACHFU	P22790 achatina fu
15	2	18.2	11	1	CORZ PERAM	P11496 periplaneta
16	2	18.2	11	1	FAR6 PENMO	P83321 penaeus mon
17	2	18.2	11	1	OAIF SARBU	P83518 sarcophaga

18	2	18.2	11	1	PKC1 CARMO	P82684	carausius m
19	2	18.2	11	1	Q20A COMTE	P80464	comamonas t
20	2	18.2	11	1	RANC_RANPI	P08951	rana pipien
21	2	18.2	11	1	RR2 CONAM	P42341	conopholis
22	2	18.2	11	1	$\overline{\text{TIN1}}$ _HOPTI	P82651	hoplobatrac
23	2	18.2	11	1	TKN2 UPERU	P08616	uperoleia r
24	2	18.2	11	1	TKNA GADMO	P28498	gadus morhu
25	2	18.2	11	1	TKNA HORSE	P01290	equus cabal
26	2	18.2	11	1	TKNA ONCMY	P28499	oncorhynchu
27	2	18.2	11	1	TKNA SCYCA	P41333	scyliorhinu
28	2	18.2	11	1	TKN PHYFU	P08615	physalaemus
29	1	9.1	11	1	ANGT CRIGE	P09037	crinia geor
30	1	9.1	11	1	ASL1 BACSE	P83146	bacteroides
31	1	9.1	11	1	COXA CANFA	P99501	canis famil
32	1	9.1	11	1	CSI5 BACSU	P81095	bacillus su
33	1	9.1	11	1	CX5A CONAL	P58848	conus aulic
34	1	9.1	11	1	CX5B CONAL	P58849	conus aulic
35	1	9.1	11	1	CXL1 CONMR	P58807	conus marmo
36	1	9.1	11	1	EFG CLOPA	P81350	clostridium
37	1	9.1	11	1	ES1 RAT	P56571	rattus norv
38	1	9.1	11	1	FAR9 CALVO	P41864	calliphora
39	1	9.1	11	1	HS70 PINPS		pinus pinas
40	1	9.1	11	1	LADD ONCMY		oncorhynchu
41	1	9.1	11	1	LPW THETH		thermus the
42	1	9.1	11	1	·LSK1 LEUMA		leucophaea
43	$\overline{1}$	9.1	11	1	LSKP PERAM		periplaneta
44	1	9.1	11	1	MHBI KLEPN		klebsiella
45	1	9.1	11	1	MLG THETS		theromyzon
46	$\overline{1}$	9.1	11	1	MORN HUMAN		homo sapien
47	1	9.1	11	1	NUHM CANFA		canis famil
48	1	9.1	11	1	NXSN PSETE		pseudonaja
49	$\overline{1}$	9.1	$\overline{11}$	1	PQQC PSEFL		pseudomonas
50	1	9.1	$\overline{11}$	1	PVK1 PERAM		periplaneta
51	1	9.1	11	1	RE41 LITRU		litoria rub
52	1	9.1	11	1	RRPL CHAV		chandipura
53	1	9.1	11	1	RS30 ONCMY		oncorhynchu
54	1	9.1	11	1	T2P1 PROVU		proteus vul
55	1	9.1	11	1	TIN4 HOPTI		hoplobatrac
56	1	9.1	11	1	TKC2 CALVO		calliphora
57	1	9.1	11	$\overline{1}$	TKN1 PSEGU		pseudophryn
58	1	9.1	11	1	TKN1 UPEIN		uperoleia i
59	1	9.1	11	1	TKN1 UPERU		uperoleia r
60	1	9.1	11	1	TKN2 PSEGU		pseudophryn
61	1	9.1	11	1	TKN3 PSEGU		pseudophryn
62	1	9.1	11	1	TKN4 PSEGU		pseudophryn
63	1	9.1	11	1	TKN5 PSEGU		pseudophryn
64	1	9.1	11	1	TKNA RANCA		rana catesb
65	1	9.1	11	1	TKNA RANRI		rana ridibu
66	1	9.1	11	1	TKND RANCA		rana catesb
67	1	9.1	11	1	TKN ELEMO		eledone mos
68	1	9.1	11	1	UF05 MOUSE		mus musculu
69	1	9.1	11	1	ULAG HUMAN		homo sapien
70	1	9.1	11	1	UXB2 YEAST		saccharomyc
, 0	1	J • 1		_	******	133013	

```
RESULT 1
ASL2 BACSE
     ASL2 BACSE
                                    PRT;
                    STANDARD;
                                            11 AA.
AC
     P83147;
DТ
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Acharan sulfate lyase 2 (EC 4.2.2.-) (Fragment).
DE
     Bacteroides stercoris.
OS
     Bacteria; Bacteroidetes; Bacteroides (class); Bacteroidales;
OC
OC
     Bacteroidaceae; Bacteroides.
     NCBI TaxID=46506;
OX
RN
     [1]
     SEQUENCE, FUNCTION, ENZYME REGULATION, AND SUBUNIT.
RP
RC
     STRAIN=HJ-15;
RX
     MEDLINE=21223019; PubMed=11322884;
RA
     Kim B.-T., Hong S.-W., Kim W.-S., Kim Y.S., Kim D.-H.;
     "Purification and characterization of acharan sulfate lyases, two
RT
     novel heparinases, from Bacteroides stercoris HJ-15.";
RT
     Eur. J. Biochem. 268:2635-2641(2001).
RL.
     -!- FUNCTION: Degrades acharan sulfate and, to a lesser extent,
CC
         heparin and heparan sulfate.
CC
     -!- ENZYME REGULATION: Inhibited by cupric ion, nitrogen and lead.
CC
CC
         Activated by reducing agents, such as DL-dithiothreitol and 2-
CC
         mercaptoethanol.
     -!- SUBUNIT: Monomer.
CC
     -!- PTM: The N-terminus is blocked.
CC
     -!- MISCELLANEOUS: Has an isoelectric point of 8.6. Its optimum pH is
CC
         7.2 and optimum temperature 45 degrees Celsius.
CC
     Lyase; Heparin-binding.
KW
     NON TER
FT
                   1
                          1
FT
     NON TER
                  11
                         11
SO
     SEQUENCE
                11 AA; 1195 MW;
                                 D79D897C7AA451AD CRC64;
  Query Match
                          27.3%; Score 3; DB 1; Length 11;
                          100.0%; Pred. No. 1.1e+03;
  Best Local Similarity
  Matches
            3; Conservative 0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
            1 ATN 3
Qу
              \perp
Db
            4 ATN 6
RESULT 2
TKNA CHICK
                    STANDARD;
                                    PRT:
                                            11 AA.
ID
     TKNA CHICK
     P19850;
AC
     01-FEB-1991 (Rel. 17, Created)
DT
     01-FEB-1991 (Rel. 17, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Substance P.
DE
OS
     Gallus gallus (Chicken).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC
OC
     Gallus.
OX
     NCBI TaxID=9031;
```

```
RN
     [1]
RP
     SEOUENCE.
RC
     TISSUE=Intestine;
     MEDLINE=88204263; PubMed=2452461;
RX
RA
     Conlon J.M., Katsoulis S., Schmidt W.E., Thim L.;
     "[Arg3] substance P and neurokinin A from chicken small intestine.";
RТ
RL
     Regul. Pept. 20:171-180(1988).
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
CC
         evoke behavioral responses, are potent vasodilators and
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR; JN0023; JN0023.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
     Tachykinin; Neuropeptide; Amidation; Neurotransmitter.
KW
FT
     MOD RES
                                  AMIDATION.
                  11
                         11
     \overline{\mathtt{SEQUENCE}}
                                  21487FE3C9D6C6C7 CRC64;
                11 AA; 1377 MW;
SQ
                           27.3%; Score 3; DB 1; Length 11;
  Query Match
  Best Local Similarity
                           100.0%; Pred. No. 1.1e+03;
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
             3; Conservative
                                0; Mismatches
  Matches
            9 RPR 11
Qу
              \perp
Db
            1 RPR 3
RESULT 3
BPP3 BOTIN
ID
     BPP3 BOTIN
                    STANDARD;
                                    PRT;
                                            11 AA.
AC
     P30423;
     01-APR-1993 (Rel. 25, Created)
DT
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Bradykinin-potentiating peptide S4,3,2 (10C) (Angiotensin-converting
DE
     enzyme inhibitor).
     Bothrops insularis (Island jararaca) (Queimada jararaca).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC
     Viperidae; Crotalinae; Bothrops.
OC
     NCBI TaxID=8723;
OX
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Venom;
     MEDLINE=90351557; PubMed=2386615;
RX
     Cintra A.C.O., Vieira C.A., Giglio J.R.;
RA
     "Primary structure and biological activity of bradykinin potentiating
RT
     peptides from Bothrops insularis snake venom.";
RT
     J. Protein Chem. 9:221-227(1990).
RL
     -!- FUNCTION: This peptide both inhibits the activity of the
CC
         angiotensin-converting enzyme and enhances the action of
CC
         bradykinin by inhibiting the kinases that inactivate it.
CC
         It acts as an indirect hypotensive agent.
CC
DR
     PIR; C37196; C37196.
```

```
Hypotensive agent; Pyrrolidone carboxylic acid.
                                  PYRROLIDONE CARBOXYLIC ACID.
     MOD RES
FT
                   1
                          1
                                  20B25813C7741777 CRC64;
     SEQUENCE
                11 AA; 1199 MW;
SO
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                                0; Mismatches
                                                                              0;
                                                    0;
                                                       Indels
                                                                  0; Gaps
             2; Conservative
           10 PR 11
Qy
              11
            5 PR 6
Db
RESULT 4
BPP4 BOTIN
                                    PRT;
                                            11 AA.
     BPP4 BOTIN
                    STANDARD;
ID
AC
     P30424;
     01-APR-1993 (Rel. 25, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Bradykinin-potentiating peptide S4,1,2 (Angiotensin-converting
DΕ
DE
     enzyme inhibitor).
     Bothrops insularis (Island jararaca) (Queimada jararaca).
os
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC.
     Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC
     Viperidae; Crotalinae; Bothrops.
OC
     NCBI TaxID=8723;
OX
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Venom;
     MEDLINE=90351557; PubMed=2386615;
RX
     Cintra A.C.O., Vieira C.A., Giglio J.R.;
RA
     "Primary structure and biological activity of bradykinin potentiating
RТ
     peptides from Bothrops insularis snake venom.";
RT
     J. Protein Chem. 9:221-227(1990).
RL
     -!- FUNCTION: This peptide both inhibits the activity of the
CC
         angiotensin-converting enzyme and enhances the action of
CC
         bradykinin by inhibiting the kinases that inactivate it.
CC
         It acts as an indirect hypotensive agent.
CC
DR
     PIR; D37196; D37196.
     Hypotensive agent; Pyrrolidone carboxylic acid.
KW
FT
     MOD RES
                                   PYRROLIDONE CARBOXYLIC ACID.
                          1
                   1
     SEQUENCE
                11 AA; 1143 MW;
                                   20BBBF13C7741777 CRC64;
SQ
                           18.2%; Score 2; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                                                                               0;
                               0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
             2; Conservative
  Matches
           10 PR 11
Qу
              11
            5 PR 6
Db
RESULT 5
BPPB AGKHA
     BPPB AGKHA
                    STANDARD;
                                    PRT;
                                            11 AA.
ID
     P01021:
AC
```

KW

```
21-JUL-1986 (Rel. 01, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Bradykinin-potentiating peptide B (Angiotensin-converting
DE
DE
     enzyme inhibitor).
     Agkistrodon halys blomhoffi (Mamushi) (Gloydius blomhoffii).
os
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC
     Viperidae; Crotalinae; Gloydius.
OC
     NCBI TaxID=242054;
OX
RN
RP
     SEQUENCE.
     TISSUE=Venom;
RC
     Kato H., Suzuki T.;
RA
     "Amino acid sequence of bradykinin-potentiating peptide isolated from
RT
     the venom of Agkistrodon halys blomhoffii.";
RT
     Proc. Jpn. Acad., B, Phys. Biol. Sci. 46:176-181(1970).
RL
     -!- FUNCTION: This peptide both inhibits the activity of the
CC
         angiotensin-converting enzyme and enhances the action of
CC
         bradykinin by inhibiting the kinases that inactivate it.
CC
         It acts as an indirect hypotensive agent.
CC
     PIR; A01254; XASNBA.
DR
     Hypotensive agent; Pyrrolidone carboxylic acid.
KW
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                          1
                11 AA; 1199 MW; 295CBF0627741777 CRC64;
SO
     SEOUENCE
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                                0; Mismatches
                                                                              0;
                                                   0; Indels
                                                                  0; Gaps
             2:
                Conservative
           10 PR 11
Qy
Db
            5 PR 6
RESULT 6
BPP AGKHP
                                            11 AA.
     BPP AGKHP
                    STANDARD;
                                    PRT;
AC
     P04562;
     13-AUG-1987 (Rel. 05, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Bradykinin-potentiating peptide (Angiotensin-converting
DE
     enzyme inhibitor).
DΕ
     Aqkistrodon halys pallas (Chinese water mocassin) (Gloydius halys
os
os
     pallas).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC
     Viperidae; Crotalinae; Gloydius.
OC
OX
     NCBI TaxID=8714;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Venom;
     MEDLINE=86177022; PubMed=3008123;
RX
     Chi C.-W., Wang S.-Z., Xu L.-G., Wang M.-Y., Lo S.-S., Huang W.-D.;
RA
     "Structure-function studies on the bradykinin potentiating peptide
RT
     from Chinese snake venom (Agkistrodon halys pallas).";
RT
```

```
Peptides 6 Suppl. 3:339-342(1985).
RL
     -!- FUNCTION: This peptide both inhibits the activity of the
CC
         angiotensin-converting enzyme and enhances the action of
CC
         bradykinin by inhibiting the kinases that inactivate it.
CC
         It acts as an indirect hypotensive agent.
CC
     PIR; JC0002; XAVIBH.
DR
KW
     Hypotensive agent; Pyrrolidone carboxylic acid.
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
                11 AA; 1112 MW; 30BABF1277686777 CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                              0; Mismatches
            2; Conservative
                                                    0; Indels
                                                                      Gaps
                                                                              0;
            7 GR 8
Qу
              2 GR 3
Db
RESULT 7
BRK MEGFL
     BRK MEGFL
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P12797;
DT
     01-OCT-1989 (Rel. 12, Created)
     01-OCT-1989 (Rel. 12, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     Megascoliakinin ([Thr6]bradykinin-Lys-Ala) [Contains: Bradykinin-like
DE
     peptide ([Thr6]bradykinin)].
     Megascolia flavifrons (Garden dagger wasp) (Solitary wasp).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Vespoidea;
OC
     Scoliidae; Megascolia.
OX
     NCBI TaxID=7437;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Venom:
RX
     MEDLINE=87293024; PubMed=3617088;
     Yasuhara T., Mantel P., Nakajima T., Piek T.;
RA
RT
     "Two kinins isolated from an extract of the venom reservoirs of the
RT
     solitary wasp Megascolia flavifrons.";
RL
     Toxicon 25:527-535(1987).
RN
     [2]
     SEQUENCE.
RP
RC
     TISSUE=Venom;
     Nakajima T., Piek T., Yashuara T., Mantel P.;
RA
     "Two kinins isolated from the venom of Megascolia flavifrons.";
RT
RL
     Toxicon 26:34-34(1988).
     -!- FUNCTION: Both proteins have bradykinin-like, although lower
CC
         activities (e.g. smooth muscle contraction).
CC
     -!- SUBCELLULAR LOCATION: Secreted; wasp venom reservoirs.
CC
CC
     -!- SIMILARITY: Belongs to the bradykinin family.
     PIR; B26744; B26744.
DR
     GO; GO:0005615; C:extracellular space; IDA.
DR
     GO; GO:0045776; P:negative regulation of blood pressure; ISS.
DR
     GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; TAS.
DR
KW
     Bradykinin; Vasodilator.
                                  MEGASCOLIAKININ.
     PEPTIDE
                   1
                         11
FT
```

```
FT
     PEPTIDE
                                  BRADYKININ-LIKE PEPTIDE.
SO
     SEQUENCE
                11 AA; 1273 MW;
                                  33867393D771A9C8 CRC64;
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
            2; Conservative
                              0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            9 RP 10
Qy
              11
Db
            1 RP 2
RESULT 8
CA21 LITCI
     CA21 LITCI
                    STANDARD;
                                   PRT:
ID
                                           11 AA.
AC
     P82087;
     16-OCT-2001 (Rel. 40, Created)
DT
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DΕ
     Caerulein 2.1/2.1Y4.
     Litoria citropa (Australian blue mountains tree frog).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
     Pelodryadinae; Litoria.
     NCBI TaxID=94770;
OX
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
RT
     "Caerulein-like peptides from the skin glands of the Australian blue
     montains tree frog Litoria citropa. Part 1. Sequence determination
RT
     using electrospray mass spectrometry.";
RT
RL
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
CC
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
     -!- PTM: Isoform 2.1Y4 differs from isoform 2.1 in not being
CC
CC
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1372; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
DR
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
KW
KW
     Pyrrolidone carboxylic acid.
\mathbf{FT}
     MOD RES
                                  PYRROLIDONE CARBOXYLIC ACID.
                   1
                          1
     MOD RES
FT
                   4
                          4
                                  SULFATION.
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1312 MW; 10DAB7C4EDD861BB CRC64;
SQ
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.3e+04;
                                                                              0;
            2; Conservative 0; Mismatches
  Matches
                                                    0; Indels
                                                                  0; Gaps
            6 TG 7
Qу
              11
            5 TG 6
Db
```

```
RESULT 9
CA22 LITCI
                                    PRT;
                                            11 AA.
     CA22 LITCI
                    STANDARD;
AC
     P82088;
DТ
     16-OCT-2001 (Rel. 40, Created)
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Caerulein 2.2/2.2Y4.
DE
     Litoria citropa (Australian blue mountains tree frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
OC
     Pelodryadinae; Litoria.
    NCBI TaxID=94770;
OX
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Skin secretion;
RX
    MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
     "Caerulein-like peptides from the skin glands of the Australian blue
RT
RT
    montains tree frog Litoria citropa. Part 1. Sequence determination
RT
     using electrospray mass spectrometry.";
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
RL
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
CC
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
CC
     -!- PTM: Isoform 2.2Y4 differs from isoform 2.2 in not being
CC
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1388; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
DR
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
KW
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
ΚW
     Pyrrolidone carboxylic acid:
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
    MOD RES
                   1
                          1
FT
                   4
                          4
                                   SULFATION.
    MOD RES
                                  AMIDATION.
FT
    MOD RES
                  11
                         11
SQ
     SEQUENCE
                11 AA; 1328 MW;
                                  10DAB894EDD861BB CRC64;
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
  Matches
             2; Conservative
                                0; Mismatches
                                                   0;
                                                       Indels
                                                                   0; Gaps
                                                                               0;
            6 TG 7
Qу
              11
            5 TG 6
Db
RESULT 10
CA31 LITCI
                                    PRT;
                                            11 AA.
ID
     CA31 LITCI
                    STANDARD;
AC
     P82089;
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DТ
DΤ
     10-OCT-2003 (Rel. 42, Last annotation update)
     Caerulein 3.1/3.1Y4.
DE
```

```
Litoria citropa (Australian blue mountains tree frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
     Pelodryadinae; Litoria.
OC
     NCBI TaxID=94770;
OX
RN
     SEQUENCE, AND MASS SPECTROMETRY.
RP
     TISSUE=Skin secretion;
RC
RX
     MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
RT
     "Caerulein-like peptides from the skin glands of the Australian blue
     montains tree frog Litoria citropa. Part 1. Sequence determination
RT
     using electrospray mass spectrometry.";
RT
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
RL
CC
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
     -!- PTM: Isoform 3.1Y4 differs from isoform 3.1 in not being
CC
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1407; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
DR
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
ΚW
KW
     Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                          1
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   4
                          4
                                   SULFATION.
FT
     MOD RES
                  11
                         11
                                   AMIDATION.
SO
     SEQUENCE
                11 AA; 1347 MW;
                                  10DAB7D67861A86B CRC64;
  Ouerv Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
             2; Conservative
                                0: Mismatches
                                                                               0;
  Matches
                                                    0; Indels
                                                                  0;
                                                                       Gaps
QУ
            6 TG 7
              11
Db
            6 TG 7
RESULT 11
CA32 LITCI
     CA32 LITCI
                    STANDARD;
                                    PRT;
                                            11 AA.
TD
AC
     P82090;
     16-OCT-2001 (Rel. 40, Created)
DТ
DΤ
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Caerulein 3.2/3.2Y4.
os
     Litoria citropa (Australian blue mountains tree frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
OC
     Pelodryadinae; Litoria.
OX
     NCBI TaxID=94770;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
```

```
"Caerulein-like peptides from the skin glands of the Australian blue
RT
     montains tree frog Litoria citropa. Part 1. Sequence determination
RT
RT
     using electrospray mass spectrometry.";
RL
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
CC
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
CC
     -!- PTM: Isoform 3.2Y4 differs from isoform 3.2 in not being
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1423; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
CC
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
KW
KW
     Pyrrolidone carboxylic acid.
    MOD RES
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
                   1
FT
    MOD RES
                   4
                          4
                                  SULFATION.
    MOD RES
                         11
                                  AMIDATION.
FT
                  11
                11 AA; 1363 MW; 10DAB8867861A86B CRC64;
     SEQUENCE
SO
                          18.2%; Score 2; DB 1; Length 11;
 Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
                                                                              0;
                                                                  0; Gaps
            2; Conservative 0; Mismatches
                                                  0; Indels
 Matches
            6 TG 7
Qу
              -11
            6 TG 7
Db
RESULT 12
CA41 LITCI
     CA41 LITCI
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P82091;
DT
     16-OCT-2001 (Rel. 40, Created)
DΨ
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Caerulein 4.1/4.1Y4.
OS
     Litoria citropa (Australian blue mountains tree frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
OC
     Pelodryadinae; Litoria.
OX
     NCBI_TaxID=94770;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
     "Caerulein-like peptides from the skin glands of the Australian blue
RT
RT
     montains tree frog Litoria citropa. Part 1. Sequence determination
RT
     using electrospray mass spectrometry.";
RL
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
CC
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
     -!- PTM: Isoform 4.1Y4 differs from isoform 4.1 in not being
CC
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1388; METHOD=Electrospray.
```

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-!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
DR
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
KW
KW
     Pyrrolidone carboxylic acid.
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
                   4
     MOD RES
                          4
                                  SHIFATION.
FΤ
                                  AMIDATION.
FT
     MOD RES
                  11
                         11
                11 AA; 1328 MW;
                                  10DAB7C4F5B861BB CRC64;
SQ
     SEQUENCE
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
             2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            6 TG 7
Qу
              5 TG 6
Db
RESULT 13
CA42 LITCI
                                   PRT;
                                            11 AA.
     CA42 LITCI
                    STANDARD;
AC
     P82092;
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Caerulein 4.2/4.2Y4.
DE
     Litoria citropa (Australian blue mountains tree frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC.
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
OC
     Pelodryadinae; Litoria.
     NCBI TaxID=94770;
OX
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=20057701; PubMed=10589099;
RA
     Wabnitz P.A., Bowie J.H., Tyler M.J.;
     "Caerulein-like peptides from the skin glands of the Australian blue
RT
     montains tree frog Litoria citropa. Part 1. Sequence determination
RT
     using electrospray mass spectrometry.";
RT
     Rapid Commun. Mass Spectrom. 13:2498-2502(1999).
RL
CC
     -!- FUNCTION: Hypotensive neuropeptide (Probable).
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
     -!- PTM: Isoform 4.2Y4 differs from isoform 4.2 in not being
CC
         sulfated.
CC
     -!- MASS SPECTROMETRY: MW=1404; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
CC
DR
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; FALSE NEG.
     Amphibian defense peptide; Hypotensive agent; Amidation; Sulfation;
KW
     Pyrrolidone carboxylic acid.
KW
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
FT
     MOD RES
                   4
                          4
                                   SULFATION.
                  11
FT
     MOD RES
                         11
                                  AMIDATION.
                        1344 MW; 10DAB894F5B861BB CRC64;
SQ
     SEQUENCE
                11 AA;
```

```
Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.3e+04;
            2; Conservative
                              0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                             0;
            6 TG 7
Qу
             11
            5 TG 6
Db
RESULT 14
CEP1 ACHFU
ID
     CEP1 ACHFU
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P22790;
DT
     01-AUG-1991 (Rel. 19, Created)
DT
     01-AUG-1991 (Rel. 19, Last sequence update)
DТ
     01-DEC-1992 (Rel. 24, Last annotation update)
DE
     Cardio-excitatory peptide-1 (ACEP-1).
OS
     Achatina fulica (Giant African snail).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Pulmonata; Stylommatophora;
OC
     Sigmurethra; Achatinoidea; Achatinidae; Achatina.
OX
     NCBI TaxID=6530;
RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=Ferussac; TISSUE=Heart atrium;
    MEDLINE=90211261; PubMed=2322251;
RX
     Fujimoto K., Ohta N., Yoshida M., Kubota I., Muneoka Y., Kobayashi M.;
RA
RT
     "A novel cardio-excitatory peptide isolated from the atria of the
     African giant snail, Achatina fulica.";
RT
     Biochem. Biophys. Res. Commun. 167:777-783(1990).
RL
     -!- FUNCTION: Potentiates the beat of the ventricle, and has also
CC
CC
         excitatory actions on the penis retractor muscle, the buccal
         muscle and the identified neurons controlling the buccal muscle
CC
CC
        movement of achatina.
     -!- SIMILARITY: TO POSSIBLE PEPTIDE L5 FROM APLYSIA.
CC
DR
     PIR; A34662; A34662.
KW
     Hormone; Amidation.
FT
     MOD RES
                 11
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1305 MW; 82D6D5B9C7741365 CRC64;
SO
                          18.2%; Score 2; DB 1; Length 11;
 Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
 Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                              0;
            7 GR 8
ÒУ
              11
Db
            9 GR 10
RESULT 15
CORZ PERAM
     CORZ PERAM
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
     P11496;
AC
     01-OCT-1989 (Rel. 12, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DТ
DF.
     Corazonin.
     Periplaneta americana (American cockroach).
OS
```

```
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
OC
     NCBI TaxID=6978;
OX
RN
     [1]
     SEQUENCE.
RP
     TISSUE=Corpora cardiaca;
RC.
     MEDLINE=89325572; PubMed=2753132;
RX
RA
     Veenstra J.A.;
RT
     "Isolation and structure of corazonin, a cardioactive peptide from
     the American cockroach.";
RТ
     FEBS Lett. 250:231-234(1989).
RL
     -!- FUNCTION: Cardioactive peptide. Corazonin is probably involved
CC
         in the physiological regulation of the heart beat.
CC
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     PIR; S05002; S05002.
DR
ΚW
     Neuropeptide; Amidation; Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                                   PYRROLIDONE CARBOXYLIC ACID.
                          1
FT
     MOD RES
                  11
                         11
                                   AMIDATION.
SQ
     SEQUENCE
                11 AA; 1387 MW; C7CFF32D6415AB46 CRC64;
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
  Matches
             2; Conservative
                                 0; Mismatches
                                                                               0;
                                                    0; Indels
                                                                   0; Gaps
            2 TN 3
Qy
              \mathbf{H}
Db
           10 TN 11
RESULT 16
FAR6 PENMO
ID
     FAR6 PENMO
                    STANDARD;
                                    PRT:
                                            11 AA.
AC
     P83321;
DT
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
DТ
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     FMRFamide-like neuropeptide FLP6 (DGRTPALRLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Eyestalk;
     MEDLINE=21956277; PubMed=11959015;
RX
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RA
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
RT
     of the giant tiger prawn Penaeus monodon.";
RL
     Comp. Biochem. Physiol. 131B:325-337(2002).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1301.8; METHOD=MALDI.
CC
     -!- SIMILARITY: Belongs to the FARP (FMRFamide related peptide)
CC
         family.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
```

```
Neuropeptide; Amidation.
KW
FT
     MOD RES
                                  AMIDATION.
                  11
                         11
     SEOUENCE
SO
                11 AA; 1301 MW; 9A19C860072DC771 CRC64;
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
                               0; Mismatches
                                                                              0:
             2; Conservative
                                                   0; Indels
                                                                  0; Gaps
            7 GR 8
Qу
              11
            2 GR 3
Dh
RESULT 17
OAIF SARBU
     OAIF SARBU
                    STANDARD;
                                   PRT;
                                           11 AA.
ID
AC
     P83518;
     10-OCT-2003 (Rel. 42, Created)
DT
DT
     10-OCT-2003 (Rel. 42, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
     Ovary-derived ACE interactive factor (Neb-ODAIF) [Contains: Neb-
DE
DE
     ODAIF(1-9); Neb-ODAIF(1-7)].
os
     Sarcophaga bullata (Grey flesh fly) (Neobellieria bullata).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
OC
OC
     Sarcophagidae; Sarcophaga.
OX
     NCBI TaxID=7385;
RN
     [1]
     SEQUENCE, SYNTHESIS, CHARACTERIZATION, AND MASS SPECTROMETRY.
RP
RC
RX
     MEDLINE=22272747; PubMed=12383874;
RA
     Vandingenen A., Hens K., Baggerman G., Macours N., Schoofs L.,
RA
     De Loof A., Huybrechts R.;
RT
     "Isolation and characterization of an angiotensin converting enzyme
RT
     substrate from vitellogenic ovaries of Neobellieria bullata.";
RL
     Peptides 23:1853-1863(2002).
CC
     -!- FUNCTION: Substrate for angiotensin converting enzyme (ACE) in
CC
         vitro.
CC
     -!- PTM: ACE hydrolyzes Neb-ODAIF by sequentially cleaving off two C-
CC
         terminal dipeptides.
CC
     -!- MASS SPECTROMETRY: MW=1312.7; METHOD=MALDI; RANGE=1-11.
CC
     -!- SIMILARITY: To the N-terminal part of insect vitellogenins.
FT
                         11
                                  NEB-ODAIF.
     PEPTIDE
                   1
FT
     PEPTIDE
                   1
                          9
                                  NEB-ODAIF(1-9).
                          7
                                  NEB-ODAIF(1-7).
FT
     PEPTIDE
                   1
                                  4E114BB566C5A763 CRC64;
SQ
     SEQUENCE
                11 AA; 1314 MW;
 Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
                                0; Mismatches
                                                                              0;
 Matches
             2; Conservative
                                                   0; Indels
                                                                  0; Gaps
            3 NK 4
QУ
              11
```

RESULT 18

1 NK 2

Db

```
PKC1 CARMO
     PKC1 CARMO
                    STANDARD;
                                    PRT;
                                            11 AA.
TD
     P82684;
AC
     16-OCT-2001 (Rel. 40, Created)
DТ
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DT
     Pyrokinin-1 (Cam-PK-1) (FXPRL-Amide).
DF.
OS
     Carausius morosus (Indian stick insect).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Phasmatodea; Euphasmida; Phasmatoidea;
OC
     Heteronemiidae; Carausius.
OX
    NCBI TaxID=7022;
RN
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RP
     TISSUE=Corpora cardiaca;
RC.
     Predel R., Kellner R., Gaede G.;
RA
     "Myotropic neuropeptides from the retrocerebral complex of the stick
RT
RT
     insect, Carausius morosus (Phasmatodea: Lonchodidae).";
RL
     Eur. J. Entomol. 96:275-278(1999).
CC
     -!- FUNCTION: Mediates visceral muscle contractile activity (myotropic
CC
         activity).
CC
     -!- MASS SPECTROMETRY: MW=1235; METHOD=MALDI.
CC
     -!- SIMILARITY: Belongs to the pyrokinin family.
DR
     InterPro; IPR001484; Pyrokinin.
     PROSITE; PS00539; PYROKININ; FALSE NEG.
DR
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
    MOD RES
                  11
                         11
                                  AMIDATION.
SO
     SEQUENCE
                11 AA; 1236 MW;
                                  2BFA5225BB46C1A8 CRC64;
 Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
                                                                  0; Gaps
 Matches
             2; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                               0;
QУ
           10 PR 11
              \mathbf{I}
            9 PR 10
Db
RESULT 19
Q2OA COMTE
ID
     Q2OA COMTE
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P80464;
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
     Quinoline 2-oxidoreductase, alpha chain (EC 1.3.99.17) (Fragment).
DE
     Comamonas testosteroni (Pseudomonas testosteroni).
OS
OC
     Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
     Comamonadaceae; Comamonas.
OC.
OX
     NCBI TaxID=285;
RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=63;
    MEDLINE=96035889; PubMed=7556204;
RX
     Schach S., Tshisuaka B., Fetzner S., Lingens F.;
RA
     "Quinoline 2-oxidoreductase and 2-oxo-1,2-dihydroquinoline 5,6-
RТ
     dioxygenase from Comamonas testosteroni 63. The first two enzymes in
RT
```

```
quinoline and 3-methylquinoline degradation.";
RT
     Eur. J. Biochem. 232:536-544(1995).
RI.
     -!- FUNCTION: Converts (3-methyl-)-quinoline to (3-methyl-)2-oxo-
CC
         1,2-dihydroquinoline.
CC
CC
     -!- CATALYTIC ACTIVITY: Quinoline + acceptor + H(2)O = isoquinolin-
CC
         1(2H)-one + reduced acceptor.
     -!- COFACTOR: FAD, molybdenum and iron-sulfur.
CC
     -!- PATHWAY: Degradation of quinoline and (3-methyl-)quinoline; first
CC
CC
         step.
     -!- SUBUNIT: Heterohexamer of two alpha chains, two beta chains, and
CC
         two gamma chains (Probable).
CC
     PIR; S66606; S66606.
DR
     Oxidoreductase; Flavoprotein; FAD; Molybdenum.
KW
\mathbf{FT}
     NON TER
                  11
                         11
                11 AA; 1213 MW; 869094322B1DC2CA CRC64;
     SEQUENCE
SQ
                          18.2%; Score 2; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                                                                               0;
             2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
 Matches
           10 PR 11
Qy
              11
Db
           10 PR 11
RESULT 20
RANC RANPI
     RANC RANPI
                                   PRT;
                                            11 AA.
ID
                    STANDARD;
AC
     P08951:
     01-NOV-1988 (Rel. 09, Created)
DT
DТ
     01-NOV-1988 (Rel. 09, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DТ
DF.
     Ranatensin-C.
OS
     Rana pipiens (Northern leopard frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX
     NCBI TaxID=8404;
RN
     [1]
     SEQUENCE.
RP
RC.
     TISSUE=Skin secretion;
     MEDLINE=84131098; PubMed=6141890;
RX
RA
     Nakajima T.;
     Unpublished results, cited by:
RL
RL
     Erspamer V., Erspamer G.F., Mazzanti G., Endean R.;
     Comp. Biochem. Physiol. 77C:99-108(1984).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin.
CC
CC
     -!- SIMILARITY: Belongs to the bombesin/neuromedin B/ranatensin
CC
         family.
     InterPro; IPR000874; Bombesin.
DR
     Pfam; PF02044; Bombesin; 1.
DR
DR
     PROSITE; PS00257; BOMBESIN; 1.
     Amphibian defense peptide; Bombesin family; Amidation.
KW
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
                11 AA; 1304 MW; D6C9885A61ADC366 CRC64;
SO
     SEOUENCE
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
```

```
Best Local Similarity 100.0%; Pred. No. 1.3e+04;
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                       0;
           1 AT 2
Qу
            +1
Db
           6 AT 7
RESULT 21
RR2 CONAM
    RR2 CONAM
                  STANDARD;
                                PRT;
                                       11 AA.
AC
    P42341:
ידים
    01-NOV-1995 (Rel. 32, Created)
DТ
    01-NOV-1995 (Rel. 32, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
    Chloroplast 30S ribosomal protein S2 (Fragment).
DE
GN
OS
    Conopholis americana (Squawroot).
OG
    Chloroplast.
    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
    Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
    lamiids; Lamiales; Orobanchaceae; Orobancheae; Conopholis.
OC
OX
    NCBI TaxID=4179;
RN
    [1]
RP
    SEQUENCE FROM N.A.
    MEDLINE=92145776; PubMed=1723664;
RX
    Taylor G., Wolfe K.H., Morden C.W., Depamphilis C.W., Palmer J.D.;
RA
RT
    "Lack of a functional plastid tRNA(Cys) gene is associated with loss
    of photosynthesis in a lineage of parasitic plants.";
RT
    Curr. Genet. 20:515-518(1991).
RL
    -!- SIMILARITY: Belongs to the S2P family of ribosomal proteins.
CC
    ______
CC
CC
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    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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CC
    _____
DR
    EMBL; X64567; CAA45868.1; -.
DR
    PIR; S32575; S32575.
    HAMAP; MF 00291; -; 1.
DR
    InterPro; IPR001865; Ribosomal S2.
DR
    PROSITE; PS00962; RIBOSOMAL_S2_1; PARTIAL.
DR
    PROSITE; PS00963; RIBOSOMAL S2 2; PARTIAL.
DR
KW
    Ribosomal protein; Chloroplast.
FT
    NON TER
               11
                      11
SQ
    SEQUENCE 11 AA; 1497 MW; 76CD719954536B44 CRC64;
                        18.2%; Score 2; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.3e+04;
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
           8 RR 9
Qу
```

Db

3 RR 4

```
RESULT 22
TIN1 HOPTI
     TIN1 HOPTI
ID
                    STANDARD;
                                    PRT;
                                            11 AA.
     P82651;
AC
DТ
     16-OCT-2001 (Rel. 40, Created)
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DE
     Tigerinin-1.
     Hoplobatrachus tigerinus (Indian bull frog) (Rana tigerina).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae;
OC
     Hoplobatrachus.
OX
     NCBI TaxID=103373;
RN
     [1]
RP
     SEQUENCE, FUNCTION, MASS SPECTROMETRY, AND DISULFIDE BONDS.
RC
     TISSUE=Skin secretion;
RX
     PubMed=11031261;
RA
     Purna Sai K., Jaganadham M.V., Vairamani M., Raju N.P.,
RA
     Devi A.S., Nagaraj R., Sitaram N.;
RT
     "Tigerinins: novel antimicrobial peptides from the Indian frog Rana
RT
     tigerina.";
RL
     J. Biol. Chem. 276:2701-2707(2001).
     -!- FUNCTION: Antibacterial activity against B.subtilis, E.coli,
CC
CC
         S.aureus, M.luteus, P.putida and S.cerevisiae.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- MASS SPECTROMETRY: MW=1342; METHOD=MALDI.
KW
     Amphibian defense peptide; Antibiotic; Fungicide; Amidation.
FT
     DISULFID
                   2
                         10
FT
    MOD RES
                  11
                         11
                                   AMIDATION.
SQ
     SEQUENCE
                11 AA; 1344 MW; A2087DC960476056 CRC64;
                           18.2%; Score 2; DB 1; Length 11;
 Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
                                 0; Mismatches
             2; Conservative
                                                    0; Indels
                                                                   0;
                                                                       Gaps
                                                                               0;
           10 PR 11
Qγ
              11
Db
            8 PR 9
RESULT 23
TKN2 UPERU
     TKN2 UPERU
                    STANDARD;
                                    PRT;
                                            11 AA.
TD
AC
     P08616;
     01-AUG-1988 (Rel. 08, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Rugosauperolein II ([Lys5, Thr6]physalaemin).
DΕ
OS
     Uperoleia rugosa (Wrinkled toadlet).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Mvobatrachinae; Uperoleia.
OX
    NCBI TaxID=8368;
RN
     [1]
```

```
RP
     SEQUENCE.
     TISSUE=Skin secretion;
RC
RX
    MEDLINE=80223080; PubMed=7389029;
RA
     Nakajima T., Yasuhara T., Erspamer V., Erspamer G.F., Negri L.;
RT
     "Physalaemin- and bombesin-like peptides in the skin of the
     Australian leptodactylid frog Uperoleia rugosa.";
RT
     Chem. Pharm. Bull. 28:689-695(1980).
RL
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
    MOD RES
                   1
                          1
                  11
FT
    MOD RES
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1270 MW;
                                  3293693E59D1A327 CRC64;
SQ
 Query Match
                          18.2%; Score 2; DB 1; Length 11;
                          100.0%; Pred. No. 1.3e+04;
  Best Local Similarity
                                                                              0;
 Matches
             2; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
            5 KT 6
Qу
              11
            5 KT 6
Db
RESULT 24
TKNA GADMO
                                   PRT;
                                            11 AA.
ID
     TKNA GADMO
                    STANDARD;
AC
     P28498;
     01-DEC-1992 (Rel. 24, Created)
DT
DΤ
     01-DEC-1992 (Rel. 24, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Substance P.
     Gadus morhua (Atlantic cod).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC.
OC
     Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
OX
    NCBI TaxID=8049;
RN
     [1]
RP
     SEQUENCE.
RC.
     TISSUE=Brain;
    MEDLINE=92298992; PubMed=1376687;
RX
     Jensen J., Conlon J.M.;
RA
     "Substance-P-related and neurokinin-A-related peptides from the brain
RT
RT
     of the cod and trout.";
     Eur. J. Biochem. 206:659-664(1992).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
```

```
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
DR
     PIR; S23306; S23306.
DR
     InterPro; IPR002040; Tachy Neurokinin.
     InterPro; IPR008215; Tachykinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
     SMART: SM00203; TK: 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation; Neurotransmitter.
FT
    MOD RES
                  11
                         11
                                  AMIDATION (BY SIMILARITY).
SO
     SEQUENCE
                11 AA;
                        1315 MW;
                                  214860D759D6C6C7 CRC64;
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
            2; Conservative
                                0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
           10 PR 11
Qy
              11
Db
            2 PR 3
RESULT 25
TKNA HORSE
     TKNA HORSE
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P01290;
ĎΤ
     21-JUL-1986 (Rel. 01, Created)
     21-JUL-1986 (Rel. 01, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DF.
     Substance P.
    TAC1 OR NKNA OR TAC2 OR NKA.
GN
OS
     Equus caballus (Horse), and
     Cavia porcellus (Guinea pig).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
    Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OC
OX
    NCBI TaxID=9796, 10141;
RN
     [1]
     SEQUENCE.
RP
RC.
     SPECIES=Horse;
RA
     Studer R.O., Trzeciak A., Lergier W.;
RT
     "Isolation and amino-acid sequence of substance P from horse
RT
     intestine.";
RL
    Helv. Chim. Acta 56:860-866(1973).
RN
RP
     SEQUENCE.
     SPECIES=C.porcellus;
RC
    MEDLINE=90044685; PubMed=2478925;
ВX
RA
    Murphy R.;
RT
     "Primary amino acid sequence of guinea-pig substance P.";
RL
    Neuropeptides 14:105-110(1989).
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
    -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR: A01558: SPHO.
DR
DR
    PIR; A60654; A60654.
```

```
InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     SMART; SM00203; TK; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation; Neurotransmitter.
FT
     MOD RES
                  11
                        11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1349 MW; 3E757FE3C9D6C6C7 CRC64;
SQ
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            9 RP 10
Qy
              11
Db
            1 RP 2
RESULT 26
TKNA ONCMY
ID
     TKNA ONCMY
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P28499;
DΤ
     01-DEC-1992 (Rel. 24, Created)
DT
     01-DEC-1992 (Rel. 24, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Substance P.
OS
     Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC
     Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX
     NCBI TaxID=8022;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Brain;
     MEDLINE=92298992; PubMed=1376687;
RX
RA
     Jensen J., Conlon J.M.;
RT
     "Substance-P-related and neurokinin-A-related peptides from the brain
RТ
     of the cod and trout.";
RL
     Eur. J. Biochem. 206:659-664(1992).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; S23308; S23308.
     InterPro; IPR002040; Tachy Neurokinin.
DR
DR
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
     SMART; SM00203; TK; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation; Neurotransmitter.
FT
     MOD RES
                         11
                                  AMIDATION (BY SIMILARITY).
                  11
SQ
     SEQUENCE
                11 AA; 1358 MW; 214860DEC9D6D1F7 CRC64;
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.3e+04;
```

```
0;
                                                   0; Indels
                                                                  0; Gaps
             2: Conservative 0: Mismatches
  Matches
           10 PR 11
Qу
              11
            2 PR 3
Db
RESULT 27
TKNA SCYCA
                                           11 AA.
                                   PRT;
     TKNA SCYCA
                    STANDARD;
ID
     P41333;
AC
     01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Substance P.
     Scyliorhinus canicula (Spotted dogfish) (Spotted catshark).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC
     Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
OC
OC
     Scyliorhinidae; Scyliorhinus.
     NCBI TaxID=7830;
OX
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Brain;
     MEDLINE=93292508; PubMed=7685693;
RX
     Waugh D., Wang Y., Hazon N., Balment R.J., Conlon J.M.;
RA
     "Primary structures and biological activities of substance-P-related
RT
     peptides from the brain of the dogfish, Scyliorhinus canicula.";
RT
RL
     Eur. J. Biochem. 214:469-474(1993).
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR; S33300; S33300.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation; Neurotransmitter.
FT
     MOD RES
                         11
                                  AMIDATION.
                  11
                11 AA; 1278 MW; 214860DEC9D6D867 CRC64;
     SEQUENCE
SQ
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+04;
             2; Conservative 0; Mismatches
                                                                  0; Gaps
                                                    0;
                                                       Indels
  Matches
           10 PR 11
Qy
              11
            2 PR 3
Db
RESULT 28
TKN PHYFU
                                    PRT;
                                            11 AA.
     TKN PHYFU
                    STANDARD;
ID
AC
     P08615;
DT
     01-AUG-1988 (Rel. 08, Created)
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
```

```
DE
     Physalaemin.
     Physalaemus fuscumaculatus (Neotropical frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Leptodactylidae;
OC
OC
     Leptodactylinae; Physalaemus.
     NCBI TaxID=8378;
OX
RN
     [1]
     SEQUENCE.
RP
     TISSUE=Skin secretion;
RC
RX
     MEDLINE=66076612; PubMed=5857249;
     Erspamer V., Anastasi A., Bertaccini G., Cei J.M.;
RA
     "Structure and pharmacological actions of physalaemin, the main
RT
     active polypeptide of the skin of Physalaemus fuscumaculatus.";
RT
     Experientia 20:489-490(1964).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
DR
     PIR; S07201; S07201.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
KW
     Pyrrolidone carboxylic acid.
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                          1
                   1
                         11
                                  AMIDATION.
FT
     MOD RES
                  11
     SEOUENCE
                11 AA; 1283 MW; 3293693E59C33457 CRC64;
SO
  Query Match
                          18.2%; Score 2; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.3e+04;
  Matches
             2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            3 NK 4
Qу
              \Pi
Db
            5 NK 6
RESULT 29
ANGT CRIGE
     ANGT CRIGE
                    STANDARD;
                                   PRT;
                                            11 AA.
ID
     P09037;
AC
     01-NOV-1988 (Rel. 09, Created)
DT
     01-NOV-1988 (Rel. 09, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Crinia-angiotensin II.
DE
     Crinia georgiana (Quacking frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Crinia.
OC
     NCBI TaxID=8374;
OX
RN
     [1]
RP
     SEOUENCE.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=80024575; PubMed=488254;
```

```
RA
     Erspamer V., Melchiorri P., Nakajima T., Yasuhara T., Endean R.;
     "Amino acid composition and sequence of crinia-angiotensin, an
RT
RT
     angiotensin II-like endecapeptide from the skin of the Australian
RT
     frog Crinia georgiana.";
RL
     Experientia 35:1132-1133(1979).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
DR
     PIR: S07207; S07207.
ΚW
     Vasoconstrictor.
     SEQUENCE 11 AA; 1271 MW; 8A0921F7DB50440A CRC64;
SQ
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
 Matches
            1; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            1 A 1
            1 A 1
Db
RESULT 30
ASL1 BACSE
     ASL1 BACSE
                                   PRT;
ID
                    STANDARD;
                                           11 AA.
     P83146;
AC
DT
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Acharan sulfate lyase 1 (EC 4.2.2.-) (Fragment).
DE
OS
     Bacteroides stercoris.
     Bacteria; Bacteroidetes; Bacteroides (class); Bacteroidales;
OC
OC
     Bacteroidaceae; Bacteroides.
OX
     NCBI TaxID=46506;
RN
     [1]
RP
     SEQUENCE, FUNCTION, ENZYME REGULATION, AND SUBUNIT.
RC
     STRAIN=HJ-15;
     MEDLINE=21223019; PubMed=11322884;
RX
RA
     Kim B.-T., Hong S.-W., Kim W.-S., Kim Y.S., Kim D.-H.;
RT
     "Purification and characterization of acharan sulfate lyases, two
     novel heparinases, from Bacteroides stercoris HJ-15.";
RT
RL
     Eur. J. Biochem. 268:2635-2641(2001).
CC
     -!- FUNCTION: Degrades acharan sulfate and, to a lesser extent,
         heparin and heparan sulfate.
CC
CC
     -!- ENZYME REGULATION: Inhibited by cupric ion, nitrogen and cobalt.
CC
         Activated by reducing agents, such as DL-dithiothreitol and 2-
CC
         mercaptoethanol.
CC
     -!- SUBUNIT: Monomer.
CC
     -!- PTM: The N-terminus is blocked.
CC
     -!- MISCELLANEOUS: Has an isoelectric point of 8.6. Its optimum pH is
CC
         7.2 and optimum temperature 45 degrees Celsius.
KW
     Lyase; Heparin-binding.
     NON TER
FT
                          1
                   1
     NON TER
FT
                  11
                         11
SO
     SEQUENCE
                11 AA; 1395 MW; 01B2DAA241E865AB CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
            1; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
```

```
3 N 3
QУ
Db
            1 N 1
RESULT 31
COXA CANFA
     COXA CANFA
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P99501;
DT
     15-JUL-1998 (Rel. 36, Created)
DT
     15-JUL-1998 (Rel. 36, Last sequence update)
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Cytochrome c oxidase polypeptide Va (EC 1.9.3.1) (Fragment).
GN
OS
     Canis familiaris (Dog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OC
OX
     NCBI_TaxID=9615;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Heart;
RX
     MEDLINE=98163340; PubMed=9504812;
RA
     Dunn M.J., Corbett J.M., Wheeler C.H.;
RT
     "HSC-2DPAGE and the two-dimensional gel electrophoresis database of
     dog heart proteins.";
RT
     Electrophoresis 18:2795-2802(1997).
RL
CC
     -!- FUNCTION: This is the heme A-containing chain of cytochrome c
CC
         oxidase, the terminal oxidase in mitochondrial electron transport.
CC
     -!- CATALYTIC ACTIVITY: 4 ferrocytochrome c + O(2) = 4 ferricytochrome
CC
         c + 2 H(2)0.
CC
     -!- SUBCELLULAR LOCATION: Mitochondrial inner membrane.
CC
     -!- SIMILARITY: Belongs to the cytochrome c oxidase Va family.
DR
     HSC-2DPAGE; P99501; DOG.
DR
     InterPro; IPR003204; Cyt c ox5A.
DR
     Pfam; PF02284; COX5A; 1.
     Oxidoreductase; Heme; Mitochondrion; Inner membrane.
KW
FT
    NON TER
                  11
                        11
SO
     SEQUENCE
                11 AA; 1274 MW;
                                  910B35C5B1AB11F5 CRC64;
 Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
 Matches
            1; Conservative
                                0; Mismatches
                                                                  0; Gaps
                                                                               0;
                                                   0; Indels
            2 T 2
Qу
Db
            7 T 7
RESULT 32
CSI5 BACSU
                                            11 AA.
ID
     CSI5 BACSU
                    STANDARD;
                                   PRT;
AC
     P81095;
DT
     15-JUL-1998 (Rel. 36, Created)
     15-JUL-1998 (Rel. 36, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
    Cold shock protein CSI5 (11 kDa cold shock protein) (Fragment).
DE
```

```
OS
     Bacillus subtilis.
OC
     Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OX
     NCBI TaxID=1423;
RN
     [1]
RP
     SEQUENCE.
     STRAIN=168 / JH642;
RC
     Graumann P.L., Schmid R., Marahiel M.A.;
     Submitted (OCT-1997) to Swiss-Prot.
RL
RN
     CHARACTERIZATION.
RP
RC
     STRAIN=168 / JH642;
RX
     MEDLINE=96345629; PubMed=8755892;
RA
     Graumann P., Schroeder K., Schmid R., Marahiel M.A.;
RT
     "Cold shock stress-induced proteins in Bacillus subtilis.";
RL
     J. Bacteriol. 178:4611-4619(1996).
CC
     -!- SUBCELLULAR LOCATION: Cytoplasmic.
CC
     -!- INDUCTION: In response to low temperature.
CC
     -!- CAUTION: Could not be found in the genome of B. subtilis 168.
FT
     NON TER
                         11
     SEQUENCE
SO
                11 AA;
                        1360 MW; 15F6ECEE6322C330 CRC64;
  Query Match
                            9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
             1; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                               0;
            8 R 8
Qy
Db
            2 R 2
RESULT 33
CX5A CONAL
ID
     CX5A CONAL
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P58848;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DE.
     Conotoxin au5a.
os
     Conus aulicus (Court cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
     NCBI TaxID=89437;
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom;
RX
     MEDLINE=99452958; PubMed=10521453;
RA
     Walker C.S., Steel D., Jacobsen R.B., Lirazan M.B., Cruz L.J.,
RA
     Hooper D., Shetty R., DelaCruz R.C., Nielsen J.S., Zhou L.M.,
RA
     Bandyopadhyay P., Craig A.G., Olivera B.M.;
RT
     "The T-superfamily of conotoxins.";
     J. Biol. Chem. 274:30664-30671(1999).
RL
RN
     [2]
RP
     ERRATUM.
     Walker C.S., Steel D., Jacobsen R.B., Lirazan M.B., Cruz L.J.,
RA
RA
     Hooper D., Shetty R., DelaCruz R.C., Nielsen J.S., Zhou L.M.,
RA
     Bandyopadhyay P., Craig A.G., Olivera B.M.;
```

```
J. Biol. Chem. 274:36030-36030(1999).
RL
     -!- FUNCTION: Causes dorsal fins drooping in fish. No effect is
CC
         observed when injected into mice.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
CC
     -!- MASS SPECTROMETRY: MW=1436.6; METHOD=LSIMS.
CC
     -!- SIMILARITY: Belongs to the conotoxin T-superfamily.
     PIR; A59146; A59146.
DR
KW
     Toxin.
                   2
                          9
FT
     DISULFID
FT
     DISULFID
                   3
                         10
SQ
     SEQUENCE
                11 AA; 1441 MW;
                                  21A36775440059D7 CRC64;
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
 Matches
                                0; Mismatches
                                                                               0:
             1; Conservative
                                                   0; Indels
                                                                  0; Gaps
           10 P 10
QУ
            4 P 4
Db
RESULT 34
CX5B CONAL
     CX5B CONAL
ID
                    STANDARD;
                                    PRT;
                                            11 AA.
AC
     P58849;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DТ
     15-MAR-2004 (Rel. 43, Last annotation update)
DΕ
     Conotoxin au5b.
OS
     Conus aulicus (Court cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC.
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
     Neogastropoda; Conoidea; Conidae; Conus.
OC
OX
     NCBI TaxID=89437;
RN
     111
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom;
RX
     MEDLINE=99452958; PubMed=10521453;
RA
     Walker C.S., Steel D., Jacobsen R.B., Lirazan M.B., Cruz L.J.,
RA
     Hooper D., Shetty R., DelaCruz R.C., Nielsen J.S., Zhou L.M.,
RA
     Bandyopadhyay P., Craig A.G., Olivera B.M.;
RT
     "The T-superfamily of conotoxins.";
RL
     J. Biol. Chem. 274:30664-30671(1999).
RN
рp
     ERRATUM.
RA
     Walker C.S., Steel D., Jacobsen R.B., Lirazan M.B., Cruz L.J.,
RA
     Hooper D., Shetty R., DelaCruz R.C., Nielsen J.S., Zhou L.M.,
RA
     Bandyopadhyay P., Craig A.G., Olivera B.M.;
     J. Biol. Chem. 274:36030-36030(1999).
RL
CC
     -!- FUNCTION: Causes dorsal fins drooping in fish. No effect is
CC
         observed when injected into mice (By similarity).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
     -!- MASS SPECTROMETRY: MW=1388.6; METHOD=LSIMS.
     -!- SIMILARITY: Belongs to the conotoxin T-superfamily.
CC
DR
     PIR; B59146; B59146.
```

```
KW
     Toxin.
                   2
FT
     DISULFID
                          9
     DISULFID
                   3
                         10
FT
                11 AA; 1393 MW; 21A36775440042D7 CRC64;
SO
     SEQUENCE
                           9.1%; Score 1; DB 1; Length 11;
 Ouery Match
                         100.0%; Pred. No. 1e+05;
 Best Local Similarity
                               0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0:
 Matches
            1; Conservative
Qу
           10 P 10
            4 P 4
Db
RESULT 35
CXL1 CONMR
     CXL1 CONMR
                    STANDARD;
                                   PRT;
                                           11 AA.
ID
AC
     P58807;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Lambda-conotoxin CMrVIA.
OS
     Conus marmoreus (Marble cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
    NCBI TaxID=42752;
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom;
RX
    MEDLINE=20564325; PubMed=10988292;
     Balaji R.A., Ohtake A., Sato K., Gopalakrishnakone P., Kini R.M.,
RA
RA
     Seow K.T., Bay B.-H.;
RT
     "Lambda-conotoxins, a new family of conotoxins with unique disulfide
RT
     pattern and protein folding. Isolation and characterization from the
RT
     venom of Conus marmoreus.";
RT.
     J. Biol. Chem. 275:39516-39522(2000).
CC
     -!- FUNCTION: Inhibits the neuronal noradrenaline transporter.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
     -!- MASS SPECTROMETRY: MW=1237.93; MW_ERR=0.21; METHOD=Electrospray.
CC
CC
     -!- SIMILARITY: Belongs to the chi/lambda-conotoxin family.
KW
     Neurotoxin; Toxin; Hydroxylation.
     DISULFID
                         11
FT
                   2
FT
     DISULFID
                   3
                          8
FT
    MOD RES
                  10
                         10
                                  HYDROXYLATION.
     SEQUENCE
                11 AA; 1226 MW; 277AAC60B7232B58 CRC64;
SQ
                           9.1%; Score 1; DB 1; Length 11;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 1e+05;
 Matches
            1; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            7 G 7
Qу
```

Db

4 G 4

```
RESULT 36
EFG CLOPA
ΙD
     EFG CLOPA
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P81350;
תת
     15-JUL-1998 (Rel. 36, Created)
DT
     15-JUL-1998 (Rel. 36, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Elongation factor G (EF-G) (CP 5) (Fragment).
GN
     FUSA.
OS
     Clostridium pasteurianum.
OC
     Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
OC
     Clostridium.
ΟX
     NCBI TaxID=1501;
RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=W5;
     MEDLINE=98291870; PubMed=9629918;
RX
RA
     Flengsrud R., Skjeldal L.;
RT
     "Two-dimensional gel electrophoresis separation and N-terminal
     sequence analysis of proteins from Clostridium pasteurianum W5.";
RT
RL
     Electrophoresis 19:802-806(1998).
CC
     -!- FUNCTION: This protein promotes the GTP-dependent translocation of
CC
         the nascent protein chain from the A-site to the P-site of the
CC
         ribosome.
CC
     -!- SUBCELLULAR LOCATION: Cytoplasmic.
     -!- SIMILARITY: Belongs to the GTP-binding elongation factor family.
CC
CC
         EF-G/EF-2 subfamily.
DR
     InterPro; IPR000795; EF GTPbind.
     PROSITE; PS00301; EFACTOR GTP; PARTIAL.
DR
     Elongation factor; Protein biosynthesis; GTP-binding.
KW
     NON TER
FT
                  11
                         11
     SEQUENCE
                11 AA; 1337 MW; 412E71F1D9C33B17 CRC64;
SQ
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
            1; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
                                                                               0;
            4 K 4
Qy
Db
            1 K 1
RESULT 37
ES1 RAT
ID
     ES1 RAT
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P56571;
דת
     15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DE
     ES1 protein, mitochondrial (Fragment).
os
     Rattus norvegicus (Rat).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OC
OX
     NCBI TaxID=10116;
RN
     [1]
RP
     SEQUENCE.
     STRAIN=Wistar; TISSUE=Heart;
RC.
```

```
RA
     Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zagrosek V., Salikov J.,
     Jungblut P.R.;
RA
RL
     Submitted (SEP-1998) to Swiss-Prot.
CC
     -!- SUBCELLULAR LOCATION: Mitochondrial (Potential).
     -!- MISCELLANEOUS: By 2D-PAGE, the determined pI of this protein (spot
CC
         P2) is: 8.9, its MW is: 25 kDa.
CC
CC
     -!- SIMILARITY: BELONGS TO THE ES1 FAMILY.
KW
     Mitochondrion.
     NON TER
FΤ
                  11
                         11
     SEOUENCE
                        1142 MW; D862272D32C72DC2 CRC64;
SO
                11 AA;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
  Matches
            1; Conservative
                                 0; Mismatches
                                                   0; Indels 0; Gaps
                                                                              0;
Qу
            8 R 8
Db
            1 R 1
RESULT 38
FAR9 CALVO
     FAR9 CALVO
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P41864;
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DT
     CalliFMRFamide 9.
DE
     Calliphora vomitoria (Blue blowfly).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
OC
OC
     Calliphoridae; Calliphora.
OX
     NCBI TaxID=27454;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Thoracic ganglion;
     MEDLINE=92196111; PubMed=1549595;
RX
     Duve H., Johnsen A.H., Sewell J.C., Scott A.G., Orchard I.,
RA
RA
     Rehfeld J.F., Thorpe A.;
RT
     "Isolation, structure, and activity of -Phe-Met-Arg-Phe-NH2
     neuropeptides (designated calliFMRFamides) from the blowfly
RT
RТ
     Calliphora vomitoria.";
     Proc. Natl. Acad. Sci. U.S.A. 89:2326-2330(1992).
RL
CC
     -!- SIMILARITY: Belongs to the FARP (FMRFamide related peptide)
CC
         family.
DR
     PIR; I41978; I41978.
     Neuropeptide; Amidation.
KW
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1359 MW;
                                  8160CE46CAA44321 CRC64;
SQ
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
             1; Conservative 0; Mismatches
  Matches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            3 N 3
Qy
              1
Db
            3 N 3
```

```
RESULT 39
HS70 PINPS
     HS70 PINPS
ΙD
                    STANDARD:
                                    PRT;
                                            11 AA.
     P81672;
AC
DΤ
     15-JUL-1999 (Rel. 38, Created)
DT
     15-JUL-1999 (Rel. 38, Last sequence update)
DΤ
     15-MAR-2004 (Rel. 43, Last annotation update)
DE
     Heat shock 70 kDa protein (Fragment).
OS
     Pinus pinaster (Maritime pine).
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Coniferopsida; Coniferales; Pinaceae; Pinus.
OC
OX
     NCBI TaxID=71647;
RN
     SEQUENCE.
RP
RC
     TISSUE=Needle;
RX
     MEDLINE=99274088; PubMed=10344291;
     Costa P., Pionneau C., Bauw G., Dubos C., Bahrman N., Kremer A.,
RA
RA
     Frigerio J.-M., Plomion C.;
     "Separation and characterization of needle and xylem maritime pine
RT
RT
     proteins.";
RL
     Electrophoresis 20:1098-1108(1999).
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this protein
CC
         (spot N164) is: 5.4, its MW is: 73 kDa.
CC
     -!- SIMILARITY: Belongs to the heat shock protein 70 family.
KW
     ATP-binding; Heat shock; Multigene family.
FT
     NON TER
                   1
                          1
FT
     NON TER
                  11
                         11
SQ
     SEQUENCE
                11 AA;
                        1228 MW; 037C1BE8DAA44DD0 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
  Matches
             1; Conservative
                                 0; Mismatches
                                                  0; Indels
                                                                   0; Gaps
                                                                               0;
            1 A 1
Qy
Db
            5 A 5
RESULT 40
LADD ONCMY
     LADD ONCMY
                    STANDARD;
                                   PRT:
                                            11 AA.
AC
     P81018;
DТ
     01-NOV-1997 (Rel. 35, Created)
DT
     01-NOV-1997 (Rel. 35, Last sequence update)
     15-DEC-1998 (Rel. 37, Last annotation update)
DT
DE
     Ladderlectin (Fragment).
OS
     Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC
     Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX
    NCBI TaxID=8022;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Blood;
RX
    MEDLINE=97293418; PubMed=9149391;
```

```
RΆ
     Jensen L.E., Thiel S., Petersen T.E., Jensenuis J.C.;
RT
     "A rainbow trout lectin with multimeric structure.";
     Comp. Biochem. Physiol. 116B:385-390(1997).
RL
CC
     -!- FUNCTION: Lectin that binds sepharose.
CC
     -!- COFACTOR: Calcium is essential for sepharose binding.
     -!- SUBUNIT: Multimeric.
CC
KW
     Lectin: Calcium.
FT
     NON TER
                 11
     SEQUENCE
               11 AA; 1163 MW; 0B26227FF6D45404 CRC64;
SQ
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
          1; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
           1 A 1
           1 A 1
Dh
RESULT 41
LPW THETH
    LPW THETH
                                  PRT;
                                          11 AA.
ID
                   STANDARD;
AC
     P05624;
     01-NOV-1988 (Rel. 09, Created)
DТ
DT
     01-NOV-1988 (Rel. 09, Last sequence update)
     30-MAY-2000 (Rel. 39, Last annotation update)
DТ
     Trp operon leader peptide.
DE
GN
     TRPL.
OS
    Thermus thermophilus.
     Bacteria; Deinococcus-Thermus; Deinococci; Thermales; Thermaceae;
OC
OC
    Thermus.
    NCBI TaxID=274;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=HB8 / ATCC 27634;
RC
    MEDLINE=89000781; PubMed=2844259;
RX
     Sato S., Nakada Y., Kanaya S., Tanaka T.;
RA
RT
     "Molecular cloning and nucleotide sequence of Thermus thermophilus
RT
    HB8 trpE and trpG.";
     Biochim. Biophys. Acta 950:303-312(1988).
RL
CC
     -!- FUNCTION: THIS PROTEIN IS INVOLVED IN CONTROL OF THE BIOSYNTHESIS
CC
        OF TRYPTOPHAN.
CC
     This SWISS-PROT entry is copyright. It is produced through a collaboration
CC
CC
     between the Swiss Institute of Bioinformatics and the EMBL outstation -
     the European Bioinformatics Institute. There are no restrictions on its
CC
CC
     use by non-profit institutions as long as its content is in no way
    modified and this statement is not removed. Usage by and for commercial
CC
CC
     entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC
     or send an email to license@isb-sib.ch).
CC
DR
     EMBL; X07744; CAA30565.1; -.
KW
     Tryptophan biosynthesis; Leader peptide.
SQ
     SEQUENCE 11 AA; 1228 MW; 364B295A772DC5A7 CRC64;
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1e+05;
```

```
1; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
  Matches
            1 A 1
Qу
            2 A 2
Db
RESULT 42
LSK1 LEUMA
ID
     LSK1 LEUMA
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P04428;
     13-AUG-1987 (Rel. 05, Created)
DT
     13-AUG-1987 (Rel. 05, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DT
DE
     Leucosulfakinin-I (LSK-I).
OS
     Leucophaea maderae (Madeira cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
     Blaberidae; Leucophaea.
OX
     NCBI TaxID=6988;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=86315858; PubMed=3749893;
RA
     Nachman R.J., Holman G.M., Haddon W.F., Ling N.;
RT
     "Leucosulfakinin, a sulfated insect neuropeptide with homology to
RT
     gastrin and cholecystokinin.";
RL.
     Science 234:71-73(1986).
     -!- FUNCTION: Change the frequency and amplitude of contractions of
CC
         the hingut. Inhibits muscle contraction of hindgut.
CC
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
CC
DR
     PIR; A01622; GMROL.
     InterPro; IPR001651; Gastrin.
DR
     PROSITE; PS00259; GASTRIN; 1.
DR
     Hormone; Amidation; Sulfation.
KW
FT
     MOD RES
                   6
                          6
                                  SULFATION.
     MOD RES
FT
                  11
                         11
                                  AMIDATION.
SO
     SEQUENCE
                11 AA; 1459 MW;
                                  7E4E0680E86B5AAB CRC64;
  Query Match
                           9.1%;
                                  Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
             1; Conservative
  Matches
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            7 G 7
Qу
            7 G 7
Db
RESULT 43
LSKP PERAM
                                   PRT;
     LSKP PERAM
                                            11 AA.
ID
                    STANDARD;
AC
     P36885;
DT
     01-JUN-1994 (Rel. 29, Created)
     01-JUN-1994 (Rel. 29, Last sequence update)
DT
DT
     01-FEB-1996 (Rel. 33, Last annotation update)
DE
     Perisulfakinin (Pea-SK-I).
     Periplaneta americana (American cockroach).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
```

```
Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
OC
     NCBI TaxID=6978;
OX
RN
     [1]
     SEOUENCE.
RP
     TISSUE=Corpora cardiaca;
RC
    MEDLINE=90137190; PubMed=2615921;
RX
     Veenstra J.A.;
RA
     "Isolation and structure of two gastrin/CCK-like neuropeptides from
RT
     the American cockroach homologous to the leucosulfakinins.";
RT
     Neuropeptides 14:145-149(1989).
RL
CC
     -!- FUNCTION: Stimulates hindgut contractions.
     -!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
CC
DR
     PIR; A60656; A60656.
     InterPro; IPR001651; Gastrin.
DR
DR
     PROSITE; PS00259; GASTRIN; 1.
KW
     Hormone; Amidation; Sulfation.
                         6
                                  SULFATION.
FT
    MOD RES
                  6
    MOD RES
                  11
                         11
                                  AMIDATION.
FT
               11 AA; 1445 MW; 8B4E0680E86B5AAA CRC64;
     SEOUENCE
SO
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            1; Conservative 0; Mismatches
                                                  0; Indels
  Matches
            7 G 7
Qy
            7 G 7
Db
RESULT 44
MHBI KLEPN
     MHBI KLEPN
                    STANDARD;
                                   PRT;
                                           11 AA.
TD
AC
     P80580;
DТ
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     01-NOV-1997 (Rel. 35, Last annotation update)
DΕ
     Maleylpyruvate isomerase (EC 5.2.1.4) (Fragment).
GN
     MHBI.
OS
     Klebsiella pneumoniae.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
OC
     Enterobacteriaceae; Klebsiella.
OX
     NCBI TaxID=573;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=96349117; PubMed=8760924;
RA
     Robson N.D., Parrott S., Cooper R.A.;
     "In vitro formation of a catabolic plasmid carrying Klebsiella
RT
     pneumoniae DNA that allows growth of Escherichia coli K-12 on 3-
RT
RT
     hydroxybenzoate.";
     Microbiology 142:2115-2120(1996).
RL
     -!- CATALYTIC ACTIVITY: 3-maleylpyruvate = 3-fumarylpyruvate.
CC
KW
     Isomerase.
FT
     NON TER
                  11
                         11
SQ
     SEQUENCE
                11 AA; 1387 MW; 1EE0E2DD49C9D5AB CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
```

```
Best Local Similarity 100.0%; Pred. No. 1e+05;
          1; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
            4 K 4
Qy
             Db
            2 K 2
RESULT 45
MLG THETS
    MLG THETS
                    STANDARD;
                                   PRT:
                                           11 AA.
ID
     P41989;
AC
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DТ
     Melanotropin gamma (Gamma-melanocyte stimulating hormone) (Gamma-MSH).
DE
     Theromyzon tessulatum (Leech).
OS
OC
     Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
OC
     Rhynchobdellida; Glossiphoniidae; Theromyzon.
OX
     NCBI TaxID=13286;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Brain;
RX
     MEDLINE=94298944; PubMed=8026574;
     Salzet M., Wattez C., Bulet P., Malecha J.;
RA
RT
     "Isolation and structural characterization of a novel peptide related
RT
     to gamma-melanocyte stimulating hormone from the brain of the leech
RT
     Theromyzon tessulatum.";
RL
     FEBS Lett. 348:102-106(1994).
CC
     -!- SIMILARITY: Belongs to the POMC family.
     PIR; S45698; S45698.
KW
     Hormone; Amidation.
     MOD RES
                                  AMIDATION.
FT
                  11
                         11
                11 AA; 1486 MW; 2DB8FACE6409C1E8 CRC64;
SQ
     SEQUENCE
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1e+05;
                                                   0; Indels
          1; Conservative 0; Mismatches
                                                                 0; Gaps
                                                                             0;
 Matches
            4 K 4
Qу
           10 K 10
Db
RESULT 46
MORN HUMAN
    MORN HUMAN
                    STANDARD;
                                   PRT;
                                           11 AA.
     P01163;
AC
     21-JUL-1986 (Rel. 01, Created)
DT
     21-JUL-1986 (Rel. 01, Last sequence update)
DΤ
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Morphogenetic neuropeptide (Head activator) (HA).
DE
OS
     Homo sapiens (Human),
OS
     Rattus norvegicus (Rat),
OS
     Bos taurus (Bovine),
     Anthopleura elegantissima (Sea anemone), and
OS
     Hydra attenuata (Hydra) (Hydra vulgaris).
OS
```

```
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
     NCBI TaxID=9606, 10116, 9913, 6110, 6087;
OX
RN
     [1]
RP
     SEQUENCE.
     SPECIES=Human, Rat, and Bovine;
RC
RX
     MEDLINE=82035850; PubMed=7290191;
RA
     Bodenmuller H., Schaller H.C.;
RT
     "Conserved amino acid sequence of a neuropeptide, the head activator,
     from coelenterates to humans.";
RT
RL
     Nature 293:579-580(1981).
RN
     [2]
RP
     SEQUENCE.
RC.
     SPECIES=A.elegantissima, and H.attenuata;
RA
     Schaller H.C., Bodenmuller H.;
RT
     "Isolation and amino acid sequence of a morphogenetic peptide from
     hydra.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 78:7000-7004(1981).
RL
RN
RP
     SYNTHESIS.
RX
     MEDLINE=82050803; PubMed=7297679;
RA
     Birr C., Zachmann B., Bodenmuller H., Schaller H.C.;
RT
     "Synthesis of a new neuropeptide, the head activator from hydra.";
     FEBS Lett. 131:317-321(1981).
RL
RN
     [4]
     FUNCTION.
RP
     MEDLINE=90059923; PubMed=2583101;
RX
     Schaller H.C., Druffel-Augustin S., Dubel S.;
RA.
RT
     "Head activator acts as an autocrine growth factor for NH15-CA2 cells
RT
     in the G2/mitosis transition.";
RL
     EMBO J. 8:3311-3318(1989).
CC
     -!- FUNCTION: HA acts as an autocrine growth factor for neural cells
         in the G2/mitosis transition.
CC
     -!- CAUTION: This peptide was first isolated from nerve cells of hydra
CC
         and was called head activator by the authors, because it induced
CC
         head-specific growth and differentiation in this animal. It has
CC
         been found in mammalian intestine and hypothalamus.
DR
     PIR; A01427; YHRT.
DR
     PIR; A93900; YHXAE.
DR
     PIR; B01427; YHHU.
DR
     PIR; B93900; YHJFHY.
DR
     PIR; C01427; YHBO.
DR
     GK; P01163; -.
KW
     Growth factor; Cell cycle; Mitosis; Pyrrolidone carboxylic acid.
FT
     MOD RES
                                 PYRROLIDONE CARBOXYLIC ACID.
                         1
SO
     SEQUENCE
              11 AA; 1142 MW; 37927417C325B878 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
  Matches
            1; Conservative
                              0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                             0;
            7 G 7
Qу
```

Db

4 G 4

```
NUHM CANFA
ID
     NUHM CANFA
                    STANDARD;
                                    PRT;
                                           11 AA.
AC
     P49820;
DT
     01-OCT-1996 (Rel. 34, Created)
DT
     15-JUL-1998 (Rel. 36, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     NADH-ubiquinone oxidoreductase 24 kDa subunit (EC 1.6.5.3)
     (EC 1.6.99.3) (Fragment).
DE
     NDUFV2.
GN
OS
     Canis familiaris (Dog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX
     NCBI TaxID=9615;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Heart:
RX
     MEDLINE=98163340; PubMed=9504812;
RA
     Dunn M.J., Corbett J.M., Wheeler C.H.;
RT
     "HSC-2DPAGE and the two-dimensional gel electrophoresis database of
RT
     dog heart proteins.";
RL
     Electrophoresis 18:2795-2802(1997).
CC
     -!- FUNCTION: TRANSFER OF ELECTRONS FROM NADH TO THE RESPIRATORY
CC
         CHAIN. THE IMMEDIATE ELECTRON ACCEPTOR FOR THE ENZYME IS BELIEVED
CC
         TO BE UBIQUINONE. COMPONENT OF THE FLAVOPROTEIN-SULFUR (FP)
CC
         FRAGMENT OF THE ENZYME.
CC
     -!- CATALYTIC ACTIVITY: NADH + ubiquinone = NAD(+) + ubiquinol.
CC
     -!- CATALYTIC ACTIVITY: NADH + acceptor = NAD(+) + reduced acceptor.
CC
     -!- COFACTOR: Binds 1 2Fe-2S cluster (Potential).
CC
     -!- SUBUNIT: Mammalian complex I is composed of 45 different subunits.
CC
     -!- SUBCELLULAR LOCATION: Matrix and cytoplasmic side of the
CC
         mitochondrial inner membrane.
CC
     -!- SIMILARITY: Belongs to the complex I 24 kDa subunit family.
     HSC-2DPAGE; P49820; DOG.
     InterPro; IPR002023; Cmplx1 24kDa.
DR
     PROSITE; PS01099; COMPLEX1 24K; PARTIAL.
DR
KW
     Oxidoreductase; NAD; Ubiquinone; Mitochondrion; Metal-binding;
KW
     Iron-sulfur; Iron; 2Fe-2S.
FT
     NON TER
                  11
                         1.1
SQ
     SEQUENCE
                11 AA; 1099 MW; 267F5369C9C72DD8 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
  Matches
            1; Conservative
                              0; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                  0; Indels
            7 G 7
Qу
Db
            1 G 1
RESULT 48
NXSN PSETE
     NXSN PSETE
ID
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P59072;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     Short neurotoxin N1 (Alpha neurotoxin) (Fragment).
```

```
OS
     Pseudonaja textilis (Eastern brown snake).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC
     Elapidae; Acanthophiinae; Pseudonaja.
OX
     NCBI TaxID=8673;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom:
     MEDLINE=99449602; PubMed=10518793;
RX
     Gong N.L., Armugam A., Jeyaseelan K.;
RA
RT
     "Postsynaptic short-chain neurotoxins from Pseudonaja textilis: cDNA
RT
     cloning, expression and protein characterization.";
RT.
     Eur. J. Biochem. 265:982-989(1999).
CC
     -!- FUNCTION: Lethal neurotoxin, binds and inhibits nicotinic
CC
         acetylcholine receptors (nAChR).
     -!- SUBCELLULAR LOCATION: Secreted.
CC
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom gland.
     -!- MASS SPECTROMETRY: MW=6236; METHOD=Electrospray.
CC
     -!- MISCELLANEOUS: LD(50) is 0.84 mg/kg by intravenous injection.
CC
     -!- SIMILARITY: Belongs to the snake toxin family.
CC
DR
     InterPro; IPR003571; Snake toxin.
DR
     PROSITE; PS00272; SNAKE TOXIN; PARTIAL.
KW
     Toxin; Neurotoxin; Postsynaptic neurotoxin;
     Acetylcholine receptor inhibitor; Multigene family.
ΚW
FT
     UNSURE
                   3
                          3
    NON TER
FT
                  11
                         11
     SEQUENCE
                11 AA; 1319 MW; OD1EF0C81B58732B CRC64;
SQ
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
                                0; Mismatches
  Matches
            1; Conservative
                                                    0; Indels
                                                                      Gaps
                                                                              0;
            2 T 2
Qy
            2 T 2
Db
RESULT 49
PQQC PSEFL
     PQQC PSEFL
ID
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P55173;
DT
     01-OCT-1996 (Rel. 34, Created)
DТ
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Coenzyme PQQ synthesis protein C (Pyrroloquinoline quinone
DE
    biosynthesis protein C) (Fragment).
GN
     PQQC.
OS
     Pseudomonas fluorescens.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC
     Pseudomonadaceae; Pseudomonas.
OX
    NCBI TaxID=294;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=CHA0;
RX
    MEDLINE=96064397; PubMed=8526497;
RA
     Schnider U., Keel C., Defago G., Haas D.;
RT
     "Tn5-directed cloning of pqq genes from Pseudomonas fluorescens CHAO:
```

```
RT
     mutational inactivation of the genes results in overproduction of the
RT
     antibiotic pyoluteorin.";
     Appl. Environ. Microbiol. 61:3856-3864(1995).
RL
CC
     -!- PATHWAY: Pyrrologuinoline quinone (PQQ) biosynthesis.
CC
     -!- SIMILARITY: Belongs to the pqqC family.
     ______
CC
CC
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     or send an email to license@isb-sib.ch).
CC
     EMBL; X87299; CAA60734.1; -.
DR
     PIR; S58244; S58244.
DR
     HAMAP; MF 00654; -; 1.
KW
     PQQ biosynthesis.
FT
     NON TER
                11
SO
     SEQUENCE
               11 AA; 1182 MW; 89DF46E4C5B73771 CRC64;
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
 Best Local Similarity
                         100.0%; Pred. No. 1e+05;
           1; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                            0;
           2 T 2
Qy
           2 T 2
Db
RESULT 50
PVK1 PERAM
ΙD
    PVK1 PERAM
                   STANDARD;
                                  PRT;
                                          11 AA.
AC
     P41837;
     01-NOV-1995 (Rel. 32, Created)
DТ
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DT
DE
     Periviscerokinin-1 (Pea-PVK-1).
os
    Periplaneta americana (American cockroach).
OC
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
     Blattidae; Periplaneta.
OC
OX
    NCBI TaxID=6978;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
    TISSUE=Abdominal perisympathetic organs;
RC
RX
    MEDLINE=95232021; PubMed=7716075;
RA
     Predel R., Linde D., Rapus J., Vettermann S., Penzlin H.;
     "Periviscerokinin (Pea-PVK): a novel myotropic neuropeptide from the
RT
    perisympathetic organs of the American cockroach.";
RT
     Peptides 16:61-66(1995).
RL
CC
    -!- FUNCTION: MYOACTIVE PEPTIDE; HAS EXCITORY ACTIONS ON THE
CC
        HYPERNEURAL MUSCLE.
KW
    Neuropeptide; Amidation.
FT
    MOD RES
                 11
                        1.1
                                 AMIDATION.
SQ
    SEQUENCE
               11 AA; 1114 MW; 39DB5419D7605728 CRC64;
```

```
9.1%; Score 1; DB 1; Length 11;
  Ouery Match
  Best Local Similarity 100.0%; Pred. No. 1e+05;
                                                 0; Indels
                                                                              0;
            1: Conservative
                               0; Mismatches
                                                                  0: Gaps
            7 G 7
Qу
            1 G 1
Dh
RESULT 51
RE41 LITRU
                                   PRT;
                                           11 AA.
     RE41 LITRU
                    STANDARD;
TD
AC
     P82074;
DT
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DΕ
     Rubellidin 4.1.
     Litoria rubella (Desert tree frog).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC.
OC
     Pelodryadinae; Litoria.
OX
     NCBI TaxID=104895;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Skin secretion;
RA
     Steinborner S.T., Wabnitz P.A., Waugh R.J., Bowie J.H., Gao C.,
RA
     Tyler M.J., Wallace J.C.;
RT
     "The structure of new peptides from the Australin red tree frog
RT
     'Litoria rubella'. The skin peptide profile as a probe for the study
RT
     of evolutionary trends of amphibians.";
RL
     Aust. J. Chem. 49:955-963(1996).
CC
     -!- FUNCTION: Shows neither neuropeptide activity nor antibiotic
CC
         activity.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the skin dorsal glands.
     -!- MASS SPECTROMETRY: MW=1039; METHOD=FAB.
CC
KW
     Amphibian defense peptide; Amidation.
     MOD RES
                                  AMIDATION.
FT
                  11
                         11
SO
     SEQUENCE
                11 AA; 1040 MW; 84ED5CBC2877205A CRC64;
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
            1; Conservative 0; Mismatches
  Matches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
            7 G 7
Qу
Db
            1 G 1
RESULT 52
RRPL CHAV
                                   PRT;
                                           11 AA.
ID
     RRPL CHAV
                    STANDARD;
AC
     P13179;
     01-JAN-1990 (Rel. 13, Created)
DТ
     01-JAN-1990 (Rel. 13, Last sequence update)
DΨ
     28-FEB-2003 (Rel. 41, Last annotation update)
DΤ
     RNA polymerase beta subunit (EC 2.7.7.48) (Large structural protein)
DE
```

```
DE
     (L protein) (Fragment).
GN
OS
     Chandipura virus (strain I653514).
OC
     Viruses; ssRNA negative-strand viruses; Mononegavirales;
OC
     Rhabdoviridae; Vesiculovirus.
     NCBI TaxID=11273;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=89299473; PubMed=2741347;
RX
     Masters P.S., Bhella R.S., Butcher M., Patel B., Ghosh H.P.,
RA
RA
     Banerjee A.K.;
RT
     "Structure and expression of the glycoprotein gene of Chandipura
RT
     virus.";
RL
     Virology 171:285-290(1989).
CC
     -!- FUNCTION: THIS PROTEIN IS PROBABLY A COMPONENT OF THE ACTIVE
CC
        POLYMERASE. IT MAY FUNCTION IN RNA SYNTHESIS, CAPPING, AS WELL AS
CC
        METHYLATION OF CAPS, AND POLY(A) SYNTHESIS.
CC
     -!- CATALYTIC ACTIVITY: N nucleoside triphosphate = N diphosphate +
CC
         {RNA}(N).
     -!- SUBUNIT: THOUGHT TO FORM A TRANSCRIPTION COMPLEX WITH THE
CC
CC
       NUCLEOCAPSID (N) PROTEIN.
CC
     -!- SIMILARITY: WITH THE L PROTEIN OF OTHER RHABDOVIRUSES AND
CC
        PARAMYXOVIRUSES.
CC
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CC
     EMBL; J04350; AAA42917.1; -.
     Transferase; RNA-directed RNA polymerase.
KW
FT
    NON TER 11
                       11
    SEQUENCE 11 AA; 1189 MW; 0335D6E3AAB2D764 CRC64;
SO
                          9.1%; Score 1; DB 1; Length 11;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1e+05;
 Matches
          1; Conservative 0; Mismatches 0; Indels 0; Gaps
           3 N 3
Qу
             -
Db
           4 N 4
RESULT 53
RS30 ONCMY
    RS30 ONCMY
                   STANDARD;
                                  PRT; 11 AA.
AC
     P83328;
DΤ
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     40S ribosomal protein S30 (Fragment).
GN
OS
    Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC.
```

```
OC
    Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC
     Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX
    NCBI_TaxID=8022;
RN
     [1]
RP
    SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
    TISSUE=Skin mucus;
RC
    MEDLINE=22142142; PubMed=12147245;
RX
    Fernandes J.M.O., Smith V.J.;
RA
     "A novel antimicrobial function for a ribosomal peptide from rainbow
RT
    trout skin.";
RT
RL
    Biochem. Biophys. Res. Commun. 296:167-171(2002).
CC
    -!- FUNCTION: Has antibacterial activity against Gram-positive
CC
        bacteria.
CC
    -!- MASS SPECTROMETRY: MW=6676.6; METHOD=MALDI.
CC
    -!- SIMILARITY: Belongs to the S30E family of ribosomal proteins.
KW
    Ribosomal protein; Antibiotic.
FT
    NON TER
                 11
                        11
    SEQUENCE
               11 AA; 1123 MW; 2312AB630DD735B8 CRC64;
SO
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
           1; Conservative 0; Mismatches
                                                                           0;
 Matches
                                                  0; Indels
                                                                0; Gaps
           4 K 4
Qу
           1 K 1
Db
RESULT 54
T2P1 PROVU
    T2P1 PROVU
                                  PRT;
                                          11 AA.
ID
                   STANDARD;
    P31031;
AC
    01-JUL-1993 (Rel. 26, Created)
     01-JUL-1993 (Rel. 26, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
    Type II restriction enzyme PvuI (EC 3.1.21.4) (Endonuclease PvuI)
DΕ
     (R.PvuI) (Fragment).
DE
GN
    PVUIR.
OS
    Proteus vulgaris.
OC
    Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
    Enterobacteriaceae; Proteus.
OC
OX
    NCBI TaxID=585;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=ATCC 13315;
RC.
RX
    MEDLINE=93087186; PubMed=1454536;
     Smith M.D., Longo M., Gerard G.F., Chatterjee D.K.;
RA
     "Cloning and characterization of genes for the PvuI restriction and
RT
RT
    modification system.";
    Nucleic Acids Res. 20:5743-5747(1992).
RL
    -!- FUNCTION: RECOGNIZES THE DOUBLE-STRANDED SEQUENCE CGATCG AND
CC
CC
        CLEAVES AFTER T-4.
CC
     -!- CATALYTIC ACTIVITY: Endonucleolytic cleavage of DNA to give
CC
        specific double-stranded fragments with terminal 5'-phosphates.
     _____
CC
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    CC
    EMBL; L04163; AAA25660.1; -.
DR
    PIR; S35490; S35490.
DR
    REBASE; 1541; PvuI.
DR
KW
    Restriction system; Hydrolase; Nuclease; Endonuclease.
FT
              1
                        1
SQ
    SEQUENCE
               11 AA; 1300 MW; 9F0CDE7955B72B1A CRC64;
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
 Matches
           1; Conservative
                              0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0:
           3 N 3
Qу
           8 N 8
RESULT 55
TIN4 HOPTI
    TIN4 HOPTI
                   STANDARD;
                                  PRT;
ID
                                         11 AA.
AC
    P82654;
    16-OCT-2001 (Rel. 40, Created)
DT
    16-OCT-2001 (Rel. 40, Last sequence update)
DT
DT
    10-OCT-2003 (Rel. 42, Last annotation update)
    Tigerinin-4.
DE
    Hoplobatrachus tigerinus (Indian bull frog) (Rana tigerina).
OS
OC
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae;
OC
    Hoplobatrachus.
    NCBI TaxID=103373;
OX
RN
    SEQUENCE, FUNCTION, MASS SPECTROMETRY, AND DISULFIDE BONDS.
RP
RC
    TISSUE=Skin secretion;
RX
    PubMed=11031261;
RA
    Purna Sai K., Jaganadham M.V., Vairamani M., Raju N.P.,
    Devi A.S., Nagaraj R., Sitaram N.;
RA
RT
    "Tigerinins: novel antimicrobial peptides from the Indian frog Rana
RT
    tigerina.";
RL
    J. Biol. Chem. 276:2701-2707(2001).
    -!- FUNCTION: Antibacterial activity against B.subtilis, E.coli,
CC
CC
        S.aureus, M.luteus, P.putida and S.cerevisiae.
CC
    -!- SUBCELLULAR LOCATION: Secreted.
    -!- TISSUE SPECIFICITY: Skin.
CC
    -!- MASS SPECTROMETRY: MW=1247; METHOD=MALDI.
CC
KW
    Amphibian defense peptide; Antibiotic.
FT
    DISULFID
                        11
                  3
SQ
    SEQUENCE
               11 AA; 1248 MW; 117D8EFD37605DCB CRC64;
 Query Match
                          9.1%; Score 1; DB 1; Length 11;
 Best Local Similarity 100.0%; Pred. No. 1e+05;
           1; Conservative 0; Mismatches
                                                               0; Gaps
                                                0; Indels
                                                                           0;
```

```
8 R 8
Qy
            1 R 1
Db
RESULT 56
TKC2 CALVO
    TKC2 CALVO
                    STANDARD;
                                    PRT:
                                            11 AA.
TD
AC
     P41518;
DT
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DТ
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Callitachykinin II.
os
     Calliphora vomitoria (Blue blowfly).
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
OC
     Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
OC
     Calliphoridae; Calliphora.
OX
     NCBI_TaxID=27454;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
RX
    MEDLINE=95075727; PubMed=7984492;
RA
     Lundquist C.T., Clottens F.L., Holman G.M., Nichols R., Nachman R.J.,
RA
     Naessel D.R.;
     "Callitachykinin I and II, two novel myotropic peptides isolated from
RT
     the blowfly, Calliphora vomitoria, that have resemblances to
RT
     tachykinins.";
RT
RL
     Peptides 15:761-768(1994).
     -!- FUNCTION: Myoactive peptide.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: SOME SIMILARITY TO TACHYKININS.
CC
KW
     Tachykinin; Neuropeptide; Amidation.
FT
    MOD RES
                  11
                         11
                                  AMIDATION.
SO
     SEQUENCE
                11 AA; 1103 MW; 15D7E3F9C9CDD444 CRC64;
  Query Match
                            9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
             1; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
            7 G 7
Qу
Dh
            1 G 1
RESULT 57
TKN1 PSEGU
     TKN1 PSEGU
                    STANDARD;
                                    PRT;
                                            11 AA.
ΙD
AC
     P42986;
DT
     01-NOV-1995 (Rel. 32, Created)
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Kassinin-like peptide K-I (PG-KI).
DΕ
OS
     Pseudophryne guentheri (Guenther's toadlet).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Pseudophryne.
OC
OX
     NCBI TaxID=30349;
```

RN

[1]

```
TISSUE=Skin secretion;
RC
RX
     MEDLINE=90287814; PubMed=2356157;
RA
     Simmaco M., Severini C., de Biase D., Barra D., Bossa F.,
     Roberts J.D., Melchiorri P., Erspamer V.;
RA
     "Six novel tachykinin- and bombesin-related peptides from the skin of
RT
     the Australian frog Pseudophryne guntheri.";
RT
     Peptides 11:299-304(1990).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; B60409; B60409.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     SMART; SM00203; TK; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                          1
                                  PYRROLIDONE CARBOXYLIC ACID.
     MOD RES
FΤ
                  11
                         11
                                  AMIDATION.
                11 AA; 1269 MW;
                                  3DBA7C37C9CB1AB7 CRC64;
SQ
     SEQUENCE
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
            1; Conservative 0; Mismatches
 Matches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            7 G 7
Ov
            9 G 9
Db
RESULT 58
TKN1 UPEIN
     TKN1 UPEIN
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P82026;
     30-MAY-2000 (Rel. 39, Created)
DT
DT
     30-MAY-2000 (Rel. 39, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DΕ
     Uperin 1.1.
     Uperoleia inundata (Floodplain toadlet).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
OC
     Myobatrachinae; Uperoleia.
     NCBI TaxID=104953;
OX
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Skin secretion;
     Bradford A.M., Raftery M.J., Bowie J.H., Tyler M.J., Wallace J.C.,
RA
RA
     Adams G.W., Severini C.;
     "Novel uperin peptides from the dorsal glands of the australian
RT
     floodplain toadlet Uperoleia inundata.";
RT
     Aust. J. Chem. 49:475-484(1996).
RL
```

RΡ

SEQUENCE.

```
-!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin dorsal glands.
CC
     -!- MASS SPECTROMETRY: MW=1208; METHOD=FAB.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     InterPro; IPR002040; Tachy_Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
KW
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
     MOD RES
                                  AMIDATION.
FT
                  11
                         11
                11 AA; 1226 MW; 3293693E59CDD457 CRC64;
     SEQUENCE
SQ
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            1; Conservative 0; Mismatches
                                                    0; Indels
            1 A 1
Qу
            2 A 2
Db
RESULT 59
TKN1 UPERU
     TKN1 UPERU
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P08612;
     01-AUG-1988 (Rel. 08, Created)
DТ
     01-FEB-1994 (Rel. 28, Last sequence update)
DТ
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DΕ
     Uperolein.
     Uperoleia rugosa (Wrinkled toadlet).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
OC
     Myobatrachinae; Uperoleia.
     NCBI TaxID=8368;
OX
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Skin secretion;
     MEDLINE=75131227; PubMed=1120493;
RX
     Anastasi A., Erspamer V., Endean R.;
RA
     "Structure of uperolein, a physalaemin-like endecapeptide occurring
RT
     in the skin of Uperoleia rugosa and Uperoleia marmorata.";
RT
     Experientia 31:394-395(1975).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
```

```
SMART; SM00203; TK; 1.
DR
DR
     PROSITE; PS00267; TACHYKININ; 1.
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
KW
     MOD RES
                   1
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
                          1
     MOD RES
                  11
                         11
                                   AMIDATION.
FT
                11 AA; 1252 MW; 32867C3E59CDD457 CRC64;
     SEQUENCE
SQ
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
             1; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
           10 P 10
Qу
Db
            2 P 2
RESULT 60
TKN2 PSEGU
     TKN2 PSEGU
                    STANDARD;
                                    PRT;
                                            11 AA.
ID
     P42987;
AC
DT
     01-NOV-1995 (Rel. 32, Created)
DΤ
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Kassinin-like peptide K-II (PG-KII).
OS
     Pseudophryne quentheri (Guenther's toadlet).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Pseudophryne.
OX
     NCBI TaxID=30349;
RN
     [1]
RP
     SEOUENCE.
     TISSUE=Skin secretion;
RC.
RX
     MEDLINE=90287814; PubMed=2356157;
RA
     Simmaco M., Severini C., de Biase D., Barra D., Bossa F.,
     Roberts J.D., Melchiorri P., Erspamer V.;
RA
RT
     "Six novel tachykinin- and bombesin-related peptides from the skin of
RT
     the Australian frog Pseudophryne guntheri.";
RL
     Peptides 11:299-304(1990).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
DR
     PIR; C60409; C60409.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
DR
     SMART; SM00203; TK; 1.
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
FT
     MOD RES
                  11
                         11
                                   AMIDATION.
                11 AA; 1246 MW; 3A247C37C9CB1AB7 CRC64;
SQ
     SEQUENCE
```

```
Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
            1; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
           10 P 10
Qу
            2 P 2
Db
RESULT 61
TKN3 PSEGU
ID
     TKN3 PSEGU
                    STANDARD;
                                   PRT;
                                           11 AA.
     P42988;
AC
DT
     01-NOV-1995 (Rel. 32, Created)
     01-NOV-1995 (Rel. 32, Last sequence update)
DΨ
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DΕ
     Kassinin-like peptide K-III (PG-KIII).
OS
     Pseudophryne guentheri (Guenther's toadlet).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Pseudophryne.
OC
OX
     NCBI TaxID=30349;
RN
     [1]
     SEQUENCE.
RP
     TISSUE=Skin secretion;
RC.
     MEDLINE=90287814; PubMed=2356157;
RX
     Simmaco M., Severini C., de Biase D., Barra D., Bossa F.,
RA
     Roberts J.D., Melchiorri P., Erspamer V.;
RA
RT
     "Six novel tachykinin- and bombesin-related peptides from the skin of
RT
     the Australian frog Pseudophryne guntheri.";
RL
     Peptides 11:299-304(1990).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; D60409; D60409.
DR
     InterPro; IPR002040; Tachy Neurokinin.
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     SMART; SM00203; TK; 1.
DR
DR
     PROSITE; PS00267; TACHYKININ; 1.
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
     MOD RES
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
                   1
                          1
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
SO
     SEQUENCE
                11 AA; 1268 MW; 3DBA7C37C9CB1457 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
             1; Conservative
                               0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            3 N 3
Qу
```

1

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RESULT 62
TKN4 PSEGU
ID
     TKN4 PSEGU
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P42989;
DΤ
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DТ
DE
     Substance P-like peptide I (PG-SPI).
OS
     Pseudophryne guentheri (Guenther's toadlet).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Pseudophryne.
OX
     NCBI TaxID=30349;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=90287814; PubMed=2356157;
RA
     Simmaco M., Severini C., de Biase D., Barra D., Bossa F.,
RA
     Roberts J.D., Melchiorri P., Erspamer V.;
RT
     "Six novel tachykinin- and bombesin-related peptides from the skin of
     the Australian frog Pseudophryne guntheri.";
RТ
     Peptides 11:299-304(1990).
RT.
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
         evoke behavioral responses, are potent vasodilators and
CÇ
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; E60409; E60409.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
     SMART; SM00203; TK; 1.
DR
DR
     PROSITE; PS00267; TACHYKININ; 1.
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                                  PYRROLIDONE CARBOXYLIC ACID.
                          1
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
SQ
     SEQUENCE
                11 AA; 1294 MW; 3A247C2CC9CB1AB7 CRC64;
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1e+05;
 Matches
            1; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
           10 P 10
Qу
            2 P 2
Dh
RESULT 63
TKN5 PSEGU
ΙD
     TKN5 PSEGU
                    STANDARD;
                                   PRT;
                                            11 AA.
     P42990;
AC
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01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Substance P-like peptide II (PG-SPII).
     Pseudophryne guentheri (Guenther's toadlet).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Myobatrachidae;
OC
     Myobatrachinae; Pseudophryne.
     NCBI TaxID=30349;
OX
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Skin secretion;
     MEDLINE=90287814; PubMed=2356157;
RX
RA
     Simmaco M., Severini C., de Biase D., Barra D., Bossa F.,
     Roberts J.D., Melchiorri P., Erspamer V.;
RA
RT
     "Six novel tachykinin- and bombesin-related peptides from the skin of
RT
     the Australian frog Pseudophryne guntheri.";
RL
     Peptides 11:299-304(1990).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; F60409; F60409.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
DR
     SMART; SM00203; TK; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
KW
     Amphibian defense peptide; Tachykinin; Neuropeptide; Amidation;
KW
     Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                          1
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
     SEQUENCE
SQ
                11 AA; 1293 MW; 3A247C2CC9CB1457 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
  Matches
          1; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
           10 P 10
Qy
            2 P 2
Db
RESULT 64
TKNA RANCA
ΙD
     TKNA RANCA
                    STANDARD;
                                   PRT;
                                           11 AA.
     P22688;
AC
DT
     01-AUG-1991 (Rel. 19, Created)
DT
     01-AUG-1991 (Rel. 19, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Ranatachykinin A (RTK A).
DE
OS
     Rana catesbeiana (Bull frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
```

```
OX
     NCBI TaxID=8400;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Brain, and Intestine;
RX
     MEDLINE=91254337; PubMed=2043143;
RA
     Kozawa H., Hino J., Minamino N., Kangawa K., Matsuo H.;
     "Isolation of four novel tachykinins from frog (Rana catesbeiana)
RT
RT
     brain and intestine.";
     Biochem. Biophys. Res. Commun. 177:588-595(1991).
RL
RN
     [2]
RP
     SEQUENCE.
RC
     TISSUE=Intestine;
RX
     MEDLINE=94023216; PubMed=8210506;
RA
     Kangawa K., Kozawa H., Hino J., Minamino N., Matsuo H.;
RТ
     "Four novel tachykinins in frog (Rana catesbeiana) brain and
RT
     intestine.";
RL
     Regul. Pept. 46:81-88(1993).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
DR
     PIR; A61033; A61033.
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
     SMART; SM00203; TK; 1.
DR
DR
     PROSITE; PS00267; TACHYKININ; 1.
KW
     Tachykinin; Neuropeptide; Amidation.
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
     SEQUENCE
                11 AA; 1311 MW; 200D60CC59D40AB7 CRC64;
SO
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1e+05;
  Matches
             1; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
            4 K 4
Qу
Db
            1 K 1
RESULT 65
TKNA RANRI
     TKNA RANRI
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P29207;
DT
     01-DEC-1992 (Rel. 24, Created)
DТ
     01-DEC-1992 (Rel. 24, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Ranakinin (Substance-P-related peptide).
OS
     Rana ridibunda (Laughing frog) (Marsh frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX
     NCBI TaxID=8406;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Brain;
```

```
MEDLINE=92044543; PubMed=1658233;
RX
     O'Harte F., Burcher E., Lovas S., Smith D.D., Vaudry H., Conlon J.M.;
RA
     "Ranakinin: a novel NK1 tachykinin receptor agonist isolated with
RT
     neurokinin B from the brain of the frog Rana ridibunda.";
RT
     J. Neurochem. 57:2086-2091(1991).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     InterPro; IPR002040; Tachy Neurokinin.
DR
     InterPro; IPR008215; Tachykinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     SMART; SM00203; TK; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation.
FT
     MOD RES
                 11
                        11
                                  AMIDATION.
SO
     SEQUENCE
                11 AA; 1352 MW; 3A2460CC59D40B07 CRC64;
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 1e+05;
            1; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            4 K 4
Qу
              - [
Db
            1 K 1
RESULT 66
TKND RANCA
    TKND RANCA
                    STANDARD:
                                   PRT:
                                           11 AA.
AC
     P22691;
     01-AUG-1991 (Rel. 19, Created)
DТ
     01-AUG-1991 (Rel. 19, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Ranatachykinin D (RTK D).
     Rana catesbeiana (Bull frog).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX
     NCBI TaxID=8400;
RN
     [1]
     SEQUENCE, AND SYNTHESIS.
RP
RC.
     TISSUE=Intestine;
RX
     MEDLINE=91254337; PubMed=2043143;
     Kozawa H., Hino J., Minamino N., Kangawa K., Matsuo H.;
RA
     "Isolation of four novel tachykinins from frog (Rana catesbeiana)
RT
     brain and intestine.";
     Biochem. Biophys. Res. Commun. 177:588-595(1991).
RL
     [2]
RN
RP
     SEQUENCE.
     TISSUE=Intestine;
RC
     MEDLINE=94023216; PubMed=8210506;
RX
     Kangawa K., Kozawa H., Hino J., Minamino N., Matsuo H.;
RA
     "Four novel tachykinins in frog (Rana catesbeiana) brain and
RT
RT
     intestine.";
     Regul. Pept. 46:81-88(1993).
RL
```

```
-!- FUNCTION: Tachykinins are active peptides which excite neurons,
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
DR
     PIR; D61033; D61033.
DR
     InterPro; IPR002040; Tachy Neurokinin.
     PROSITE; PS00267; TACHYKININ; FALSE NEG.
DR
     Tachykinin; Neuropeptide; Amidation.
KW
FT
     MOD RES
                  11
                         11
                                  AMIDATION.
SQ
     SEOUENCE
                11 AA; 1350 MW; 3A34256C59D40B07 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
 Matches
            1: Conservative
                                0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            4 K 4
            1 K 1
Db
RESULT 67
TKN ELEMO
    TKN ELEMO
                    STANDARD;
                                   PRT:
                                           11 AA.
TD
     P01293;
AC
     21-JUL-1986 (Rel. 01, Created)
DΤ
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Eledoisin.
DE
     Eledone moschata (Musky octopus) (Ozaena moschata), and
OS
OS
     Eledone cirrhosa (Curled octopus) (Ozaena cirrosa).
     Eukaryota; Metazoa; Mollusca; Cephalopoda; Coleoidea; Neocoleoidea;
OC
OC
     Octopodiformes; Octopoda; Incirrata; Octopodidae; Eledone.
     NCBI TaxID=6641, 102876;
OX
RN
     [1]
RP
     SEQUENCE.
RA
     Anastasi A., Erspamer V.;
     "The isolation and amino acid sequence of eledoisin, the active
RT
     endecapeptide of the posterior salivary glands of Eledone.";
RT
RL
     Arch. Biochem. Biophys. 101:56-65(1963).
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
CC
        muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR; A01561; EOOC.
DR
DR
     PIR; B01561; EOOCC.
     PDB; 1MXQ; 18-FEB-03.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation; Pyrrolidone carboxylic acid;
KW
     3D-structure.
FT
    MOD RES
                   1
                          1
                                  PYRROLIDONE CARBOXYLIC ACID.
                  11
                         11
FT
    MOD RES
                                 AMIDATION.
```

CC

```
SQ
     SEQUENCE
                11 AA; 1206 MW; 570D7C2559CDDAA3 CRC64;
  Query Match
                           9.1%; Score 1; DB 1; Length 11;
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
 Matches
            1; Conservative
                               0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
           10 P 10
Qу
            2 P 2
Db
RESULT 68
UF05 MOUSE
ID
    UF05 MOUSE
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P38643;
DT
     01-OCT-1994 (Rel. 30, Created)
     01-OCT-1994 (Rel. 30, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DΤ
DΕ
     Unknown protein from 2D-page of fibroblasts (P48) (Fragment).
OS
    Mus musculus (Mouse).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OC
OX
     NCBI TaxID=10090;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Fibroblast;
    MEDLINE=95009907; PubMed=7523108;
RX
    Merrick B.A., Patterson R.M., Wichter L.L., He C., Selkirk J.K.;
RA
     "Separation and sequencing of familiar and novel murine proteins
RT
     using preparative two-dimensional gel electrophoresis.";
RT
     Electrophoresis 15:735-745(1994).
RL
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
         protein is: 5.5, its MW is: 48 kDa.
FT
     NON TER
                         11
                  11
     SEQUENCE
SO
                11 AA; 1328 MW; E54835E5CAAABAFA CRC64;
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
                                0; Mismatches
 Matches
            1; Conservative
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
            4 K 4
Qу
            1 K 1
Db
RESULT 69
ULAG HUMAN
     ULAG HUMAN
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
     P31933;
AC
DT
     01-JUL-1993 (Rel. 26, Created)
     01-JUL-1993 (Rel. 26, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DT
DE
     Unknown protein from 2D-page of liver tissue (Spot 118) (Fragment).
     Homo sapiens (Human).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
```

```
RN
     [1]
     SEQUENCE.
RP
RC
    TISSUE=Liver;
RX
    MEDLINE=94147969; PubMed=8313870;
    Hughes G.J., Frutiger S., Paquet N., Pasquali C., Sanchez J.-C.,
RΑ
     Tissot J.-D., Bairoch A., Appel R.D., Hochstrasser D.F.;
RA
     "Human liver protein map: update 1993.";
RT
RL
     Electrophoresis 14:1216-1222(1993).
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
         protein is: 5.5, its MW is: 34 kDa.
CC
DR
     SWISS-2DPAGE; P31933; HUMAN.
     Siena-2DPAGE; P31933; -.
DR
FT
    NON TER
                  11
                         11
                11 AA; 1219 MW; EDABD37F272DDB0A CRC64;
SQ
     SEQUENCE
  Query Match
                           9.1%; Score 1; DB 1;
                                                  Length 11;
                          100.0%; Pred. No. 1e+05;
  Best Local Similarity
                                 0; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                   0; Indels
 Matches
            1; Conservative
            1 A 1
Qу
Db
            6 A 6
RESULT 70
UXB2 YEAST
                                   PRT;
                                           11 AA.
     UXB2 YEAST
                    STANDARD;
AC
     P99013:
DТ
     01-NOV-1995 (Rel. 32, Created)
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DT
     Unknown protein from 2D-page (Spot 2D-000K2F) (Fragment).
DΕ
     Saccharomyces cerevisiae (Baker's yeast).
OS
     Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC
     Saccharomycetales; Saccharomycetaceae; Saccharomyces.
OC
OX
     NCBI TaxID=4932;
RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=X2180-1A;
     Sanchez J.-C., Golaz O., Schaller D., Morch F., Frutiger S.,
RA
     Hughes G.J., Appel R.D., Deshusses J., Hochstrasser D.F.;
RA
     Submitted (AUG-1995) to Swiss-Prot.
RL
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
         protein is: 6.20, its MW is: 9.2 kDa.
CC
     SWISS-2DPAGE; P99013; YEAST.
DR
FT
     NON TER
                         11
                  11
                        1328 MW; EC38021C0DCB42DA CRC64;
     SEQUENCE
                11 AA;
SQ
                           9.1%; Score 1; DB 1; Length 11;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1e+05;
            1; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            1 A 1
Qу
            7 A 7
Db
```

Search completed: April 8, 2004, 15:47:20 Job time : 5.15385 secs